AFCTN Test Report 93-062

AFCTB-ID 93-016

CALS TEST NETWORK

Technical Publication Transfer

Using:

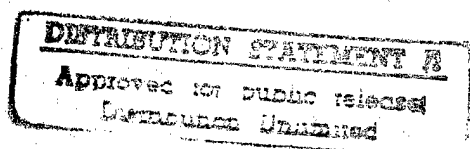# Northrop Corporation's Data

MIL-D-28000A (IGES)
MIL-M-28001A (SGML)
MIL-R-28002A (Raster)
MIL-D-28003 (CGM)

Quick Short Test Report

03 March 1993

1996082 125

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Prepared for

Electronic Systems Center

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Quick Short Test Report

3 March 1993

Prepared By
Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

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Contents

1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports. (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Northrop Corporation's interpretation and use of the CALS standards in transferring technical publication data. Northrop used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 93-016

**Date of
Evaluation:**   3 March 1993

Evaluators: George Elwood
                                 Air Force CALS Test Bed
                                 DET 2 HQ ESC/ENCP
                                 Suite 300
                                 4027 Colonel Glenn Hwy
                                 Dayton OH 45431-1672

**Data
Originator:**   John P. Kent
                                 Northrop Corporation
                                 B-2 Division
                                 L591/GK
                                 8900 East Washington Blvd
                                 Pico Rivera CA 90660
                                 (310) 948-0624

**Data
Description:**   Technical Manual Test
                                     3 Document Declaration files
                                     3 Document Type Definitions (DTD)
                                     8 Initial Graphics Exchange Specification
                                             (IGES) files
                                     3 Text files
                                     2 Raster files
                                     7 Computer Graphics Metafile (CGM) files

**Data
Source System:**

                    IGES

                                 HARDWARE
                                         Unknown
                                 SOFTWARE
                                         Unknown

Text/Standard Generalized Markup Language (SGML)

    HARDWARE
        Unknown
    SOFTWARE
        Unknown

Raster

    HARDWARE
        Unknown
    SOFTWARE
        Unknown

CGM

    HARDWARE
        Unknown
    SOFTWARE
        Unknown

Evaluation Tools Used:

    MIL-STD-1840A (TAPE)
        SUN 3/280
            AFCTN *Tapetool v1.2.8 UNIX*
            Texas Instruments (TI) *Tapetool v1.0.1*

    MIL-D-28000 (IGES)
        Sun SparcStation 2
            ArborText *iges2draw*
            IGES Data Analysis (IDA) *Parser/Verifier v92*
            IDA *IGESView v3.05*
        Cheetah Gold 486
            AUTODESK *AutoCAD 386 R12*

    MIL-M-28001 (SGML)
        Cheetah Gold 486
            Datalogics *ParserStation v3.36*
            Exoterica *XGMLNormalizer v1.2e3.2*
            Public Domain *sgmls*

MIL-R-28002 (Raster)
SUN SparcStation 2
ArborText *g42tiff*
AFCTN *validg4*
AFCTN *calstb.475*
IDA *IGESView v3.0*
Island Graphics *IslandPaint v3.0*
Cheetah
Inset Systems *HiJaak v2.1*
Inset Systems *HiJaak Window v1.0*
Software Publishing Corporation
(SPC) *Harvard Graphics v3.0*
Corel *Ventura Publisher*

MIL-D-28003 (CGM)
SUN SparcStation 2
ArborText *cgm2draw*
Island Graphics *IslandDraw v3.0*
Cheetah Gold 486
Advance Technology Center
(ATC) *MetaVIEW R 1.12*
ATC *MetaCheck R 2.05*
SPC *Harvard Graphics v3.05*
Inset Systems *HiJaak v2.1*
Inset Systems *HiJaak v1.0 Windows*
Micrografx *Designer v3.1*
Micrografx *Charisma v2.1*
Corel *Ventura Publisher*

**Standards
Tested:**
MIL-STD-1840A
MIL-D-28000A
MIL-M-28001A
MIL-R-28002A
MIL-D-28003

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with the magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape were enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files recorded on the tape.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTB *Tapetool v1.2.8* utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was also evaluated using TI's version of *Tapetool*. No errors were reported from this program.

3.2.2 Declaration and Header Fields

No errors were found in the Document Declaration file or data file headers.

4. IGES Analysis

This tape contained four IGES files. These files were evaluated using IDA's *Parser* and *Verifier* set for CALS Class I. This software reported no errors in the files.

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor and indication of meeting CALS standards. All operations were performed using the default settings.

The four files were converted using ArborText's *iges2draw* utility with no reported errors. When the resulting files were imported into Island Graphics' *IslandDraw*, file Q304 displayed the right edge with nothing printing except one line. File Q305 displayed and printed two heavy lines. Files Q306 and Q307 displayed and printed without a problem.

The four files were converted using the AUTODESK's *IGES Translator 5.1* with no reported problems. The resulting files were displayed and printed using AUTODESK's *AutoCAD R12*. The images appear to be complete.

The four files were imported into IDA's *IGESView* without a reported problem. The files displayed and printed without a problem. All files appear to be complete.

The IGES files meet the CALS MIL-D-28000A specification.

5. SGML Analysis

The tape contained three DTDs and three Text files. The DTDs were the same except for the graphic references. To save time, all of the graphic references were placed in one DTD and this file was used during all operations.

The Text files on this tape were short and only called the graphics files.

The DTD was parsed using Exotercia's *XGMLNormalizer* with no
reported errors. When the DTD was use to parse all three
Text files the same errors were reported.


```
C:\XGML\XGMLNORM.EXE --
Error on line 1 in file i:\9316-1\d001t001:
A REQUIRED attribute is missing.
For start tag 'DOC': For REQUIRED CDATA attribute 'FOSICITE'.
```


The DTD was parsed using the Datalogics' *ParseStation* soft-
ware with no reported errors. This software did use non
used elements. See the Appendix for the log file. When the
DTD was used to parse the Text files, the missing tag was
also reported. See the Appendix for the log.

The DTD was parsed using the Public Domain *sgmls* parser.
This parser reported two errors in the DTD. When the DTD
and Text files were parsed together several error message
were generated. The boardno errors are not errors because
they were commented out of the DTD before parsing. This
parser also reported the missing tag.


```
sgmls: Warning at 9316.dtd, line 451 in declaration parameter 4:
       End-tag minimization should be "O" for EMPTY element
sgmls: Warning at 9316.dtd, line 533 in declaration parameter 4:
       End-tag minimization should be "O" for EMPTY element
sgmls: SGML error at i:\9316-1\d001t001, line 1 at """:
       Required FOSICITE attribute was not specified;
       may affect processing
sgmls: SGML error at i:\9316-1\d001t001, line 5 at """:
       BOARDNO = "test1" ENTITY attribute not general entity;
       may affect processing
       Element structure: DOC BODY PARA0 FIGURE
sgmls: SGML error at i:\9316-1\d001t001, line 8 at """:
       BOARDNO = "test2" ENTITY attribute not general entity;
       may affect processing
       Element structure: DOC BODY PARA0 FIGURE
TOTALCAP 162821/200000
  ENTCAP 11552/200000
ENTCHCAP   6821/200000
 ELEMCAP   5696/200000
  GRPCAP 59200/200000
EXGRPCAP    448/200000
 EXNMCAP    992/200000
```

```
   ATTCAP  44192/200000
ATTCHCAP    756/200000
AVGRPCAP 32608/200000
  NOTCAP    192/200000
NOTCHCAP    364/200000
```

The DTD and Text files do not meet the CALS MIL-D-28001A specification.

6. Raster Analysis

The tape contained two Raster files with both Type I and Type II files. The AFCTB currently does not have the ability to evaluate Type II Raster files.

The Type I file was checked using the AFCTN *validg4* utility. No errors were reported. This file was read into the AFCTN *calstb.475* viewer and displayed. The image appear to be scanned at a slight angle.

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The file was imported into IDA's *IGESView* without a problem and viewed. The angle was noted.

The file was converted using Rosetta Technologies' *Prepare* and viewed using *Preview*. The angle was noted.

The file was converted using Inset Systems' *HiJaak* without a problem. The resulting file was read into Corel's *Ventura Publisher* and viewed.

The Raster file was imported and viewed using Inset Systems' *HiJaak for Windows* without a problem.

The Type I Raster file, R104, meets the CALS MIL-R-28002A specification.

7. CGM Analysis

This tape contained six CGM files. All files were evaluated using ATC's *MetaCheck* software with CALS options. The version in use is not the most current version of the software. This utility reported that all files meet the CALS MIL-D-28003 specification.

The files were evaluated using the AFCTN beta *validcgm* utility. This program reported errors in all files.

The AFCTB has several tools for viewing CGM files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of meeting CALS standards. All operations were performed using the default settings.

The files were converted using ArborText's *cgm2draw* utility. No errors were reported during this procedure. The resulting files were read into Island Graphics' *IslandDraw*. With the exception of font problems and misplaced lines, the files all displayed and printed correctly.

The files were directly imported into Island Graphics' *IslandDraw*. File C204 was missing the boxes around the restricted text. File C205 had most of the entities placed in the lower right corner. They over laid other entities. File C209 had some text over flow.

The files were imported into SPC's *Harvard Graphics 3.05* with all files except C209 reporting errors. The errors were line style, non-CGM entities, and non-converted entities. Files C204 and C205 were the same with missing polygon sets and cell arrays. The text font was also incorrect. File C206 had missing entities. File C207 had many entities missing. Most of the lines in file C208 did not display or print. File C209 had many text over flows.

Attempts to read the files with the Micrografx *Designer* and Inset Systems' *HiJaak for Windows* did not work. This was due to software and hardware problems combined.

According to Michael Harrison of Micrografx, "Micrografx is aware of the problems associated with reading these files and is working on a solution to be implemented in a future release of our products."

The CGM files were reported as meeting the CALS MIL-D-28003 specification.

8. Conclusions and Recommendations

In summary, the tape from Northrop Corporation is correct. The tape could be read properly using the AFCTN *Tapetool* and TI version without any reported errors. The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

The IGES files meet the CALS MIL-D-28000A specification.

Because of reported errors in the Text file, the SGML part of this tape does not meet the CALS MIL-M-28001A specification.

The Type I Raster file meets the CALS MIL-R-28002A specification.

The CGM files were reported as meeting the CAlS MIL-D-28003 specification.

Due to minor errors in the text file, the tape submitted by Northrop Corporation does not meet the CALS MIL-STD-1840A requirements.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:
  MIL-STD-1840A (1987) - Automated Interchange of Technical Information
  ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                      for Information Interchange
  ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Mar 3 14:25:25 1993
MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set068

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D002	Document Declaration	D/00260	02048/000001	Extracted
D003	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000001	Extracted
D001G002	DTD	D/00260	02048/000034	Extracted
D001H003	Output Specification	D/00260	02048/000001	Extracted
D001R004	Raster	F/00128	02048/000016	Extracted
D001R005	Raster	F/00128	02048/000008	Extracted
D002T001	Text	D/00260	02048/000001	Extracted
D002G002	DTD	D/00260	02048/000034	Extracted
D002H003	Output Specification	D/00260	02048/000001	Extracted
D002C004	CGM	F/00080	00800/000004	Extracted
<<<<< PART OF LOG REMOVED HERE >>>>>				
D002C009	CGM	F/00080	00800/000002	Extracted
D003T001	Text	D/00260	02048/000001	Extracted
D003G002	DTD	D/00260	02048/000034	Extracted
D003H003	Output Specification	D/00260	02048/000001	Extracted
D003Q004	IGES	F/00080	02000/000016	Extracted
<<<<< PART OF LOG REMOVED HERE >>>>>				
D003Q007	IGES	F/00080	02000/000047	Extracted

Catalog Process terminated normally.

9.2   Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8
   Standards referenced:
      ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                            for Information Interchange
      ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Mar 3 14:24:44 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01   CONTROLLER   4

  Label Identifier: VOL1
  Volume Identifier: ITDS01
  Volume Accessibility:
  Owner Identifier:
  Label Standard Version: 4

*** ERROR (ANSI X3.27; 8.3.1.1) - Columns 12-24 are reserved
     for future standardization and must be spaces.

HDR1D001   ITDS0100010001000100 93057 93057 000000   CONTROLLER

  Label Identifier: HDR1
  File Identifier: D001
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 93057
  Expiration Date: 93057
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: CONTROLLER

HDR2D0204800260   00

  Label Identifier: HDR2
  Recording Format: D

Block Length: 02048
Record Length: 00260
Offset Length: 00

************ Tape Mark ***************

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

************ Tape Mark ***************

EOF1D001   ITDS0100010001000100 93057 93057 000001 CONTROLLER

Label Identifier: EOF1
File Identifier: D001
File Set Identifier: ITDS01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93057
Expiration Date: 93057
File Accessibility:
Block Count: 000001
Implementation Identifier: CONTROLLER

EOF2D0204800260   00

Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00

************ Tape Mark ***************

<<<<< *PART OF LOG FILE REMOVED HERE* >>>>>

************ Tape Mark ***************

HDR1D003Q007   ITDS0100010024000100 93057 93057 000000 CONTROLLER

Label Identifier: HDR1
File Identifier: D003Q007
File Set Identifier: ITDS01
File Section Number: 0001

File Sequence Number: 0024
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93057
Expiration Date: 93057
File Accessibility:
Block Count: 000000
Implementation Identifier: CONTROLLER

HDR2F0200000080   00

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02000
  Record Length: 00080
  Offset Length: 00

************ Tape Mark ***************

  Actual Block Size Found = 2000 Bytes.

  Number of data blocks read = 47.

************ Tape Mark ***************

EOF1D003Q007   ITDS0100010024000100 93057 93057 000047   CONTROLLER

  Label Identifier: EOF1
  File Identifier: D003Q007
  File Set Identifier: ITDS01
  File Section Number: 0001
  File Sequence Number: 0024
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 93057
  Expiration Date: 93057
  File Accessibility:
  Block Count: 000047
  Implementation Identifier: CONTROLLER

EOF2F0200000080   00

  Label Identifier: EOF2
  Recording Format: F
  Block Length: 02000
  Record Length: 00080
  Offset Length: 00

************ Tape Mark ***************

************ Tape Mark ***************

############ End of Volume ITDS01 #############

############ End Of Tape File Set #############

Deallocating /dev/rmt0...

Tape Import Process terminated with 1 error(s), 0 warning(s), and 0 note(s).

9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8
    Standards referenced:
      MIL-STD-1840A (1987) - Automated Interchange of Technical Information
      MIL-R-28002 (1989) - Raster Graphics Representation In Binary
                           Format, Requirements For

Wed Mar 3 14:25:26 1993

MIL-STD-1840A File Set Evaluation Log

File Set: Set068

Found file: D001
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624
srcdocid: STPRO25.10
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT, Techne
4027 Col. Glenn Highway, Dayton, OH 45431-1601
dstdocid: CALS_RAS_TEST
dstrelid: NONE
dtetrn: 19930226
dlvacc: NONE
filcnt: T1, H1, G1, R2
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: graphics test

Found file: D001T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: STPRO25.10
dstdocid: CALS_RAS_TEST
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

```
Saving Text Header File: D001T001_HDR
Saving Text Data File: D001T001_TXT

Found file: D001G002
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: STPRO25.10
dstdocid: CALS_RAS_TEST
notes: NONE

Saving DTD Header File: D001G002_HDR
Saving DTD Data File: D001G002_DTD

Found file: D001H003
Extracting Output Specification Header Records...
Evaluating Output Specification Header Records...

srcdocid: STPRO25.10
dstdocid: CALS_RAS_TEST
notes: NONE

Saving Output Specification Header File: D001H003_HDR
Saving Output Specification Data File: D001H003_OS

Found file: D001R004
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: STPRO25.10
dstdocid: CALS_RAS_TEST
txtfilid: W
figid: NONE
srcgph: test1
doccls: UNCLASSIFIED
rtype: 1
rorient: 090,270
rpelcnt: 001728,002200
rdensty: 0200
notes: NONE

Saving Raster Header File: D001R004_HDR
Saving Raster Data File: D001R004_GR4

Found file: D001R005
Extracting Raster Header Records...
```

Evaluating Raster Header Records...

srcdocid: STPRO25.10
dstdocid: CALS_RAS_TEST
txtfilid: W
figid: NONE
srcgph: test2
doccls: UNCLASSIFIED
rtype: 2
rorient: 000,270
rpelcnt: 002560,003584
rdensty: 0300
notes: NONE

Saving Raster Header File: D001R005_HDR
Saving Raster Data File: D001R005_GR4

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

No errors were encountered in Document D001.

Found file: D002
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624
srcdocid: STPRO25.6
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT, Techne
4027 Col. Glenn Highway, Dayton, OH 45431-1601
dstdocid: CALS_CGM_TEST
dstrelid: NONE
dtetrn: 19930226
dlvacc: NONE
filcnt: T1, H1, G1, C6
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE

docttl: graphics test

Found file: D002T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: STPRO25.6
dstdocid: CALS_CGM_TEST
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D002T001_HDR
Saving Text Data File: D002T001_TXT

Found file: D002G002
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: STPRO25.6
dstdocid: CALS_CGM_TEST
notes: NONE

Saving DTD Header File: D002G002_HDR
Saving DTD Data File: D002G002_DTD

Found file: D002H003
Extracting Output Specification Header Records...
Evaluating Output Specification Header Records...

srcdocid: STPRO25.6
dstdocid: CALS_CGM_TEST
notes: NONE

Saving Output Specification Header File: D002H003_HDR
Saving Output Specification Data File: D002H003_OS

Found file: D002C004
Extracting CGM Header Records...
Evaluating CGM Header Records...

srcdocid: STPRO25.6
dstdocid: CALS_CGM_TEST
txtfilid: W
figid: NONE
srcgph: allint.cgm

doccls: UNCLASSIFIED
notes: NONE

Saving CGM Header File: D002C004_HDR
Saving CGM Data File: D002C004_CGM

<<<<< *PART OF LOG FILE REMOVED HERE* >>>>>

Found file: D002C009
Extracting CGM Header Records...
Evaluating CGM Header Records...

srcdocid: STPRO25.6
dstdocid: CALS_CGM_TEST
txtfilid: W
figid: NONE
srcgph: text.cgm
doccls: UNCLASSIFIED
notes: NONE

Saving CGM Header File: D002C009_HDR
Saving CGM Data File: D002C009_CGM

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

No errors were encountered in Document D002.

Found file: D003
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624
srcdocid: STPRO25.8
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT, Techne
4027 Col. Glenn Highway, Dayton, OH 45431-1601
dstdocid: CALS_IGES_TEST
dstrelid: NONE

dtetrn: 19930226
dlvacc: NONE
filcnt: T1, H1, G1, Q4
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: graphics test

Found file: D003T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: STPRO25.8
dstdocid: CALS_IGES_TEST
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D003T001_HDR
Saving Text Data File: D003T001_TXT

Found file: D003G002
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: STPRO25.8
dstdocid: CALS_IGES_TEST
notes: NONE

Saving DTD Header File: D003G002_HDR
Saving DTD Data File: D003G002_DTD

Found file: D003H003
Extracting Output Specification Header Records...
Evaluating Output Specification Header Records...

srcdocid: STPRO25.8
dstdocid: CALS_IGES_TEST
notes: NONE

Saving Output Specification Header File: D003H003_HDR
Saving Output Specification Data File: D003H003_OS

Found file: D003Q004
Extracting IGES Header Records...
Evaluating IGES Header Records...

srcdocid: STPRO25.8
dstdocid: CALS_IGES_TEST
txtfilid: W
figid: NONE
srcgph: apple2d.igs
doccls: UNCLASSIFIED
notes: NONE

Saving IGES Header File: D003Q004_HDR
Saving IGES Data File: D003Q004_IGS

<<<<< *PART OF LOG FILE REMOVED HERE* >>>>>

Found file: D003Q007
Extracting IGES Header Records...
Evaluating IGES Header Records...

srcdocid: STPRO25.8
dstdocid: CALS_IGES_TEST
txtfilid: W
figid: NONE
srcgph: lgtable.igs
doccls: UNCLASSIFIED
notes: NONE

Saving IGES Header File: D003Q007_HDR
Saving IGES Data File: D003Q007_IGS

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

No errors were encountered in Document D003.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

10.   Appendix B - Detailed IGES Analysis

10.1   File Q204

10.1.1   Parser/Verifier Log

```
        *** IGES DATA FILE ANALYSIS ***
        ***         MARCH 1992        ***
        ***   IGES Data Analysis     ***
        ***      (708) 449-3430       ***

Input file is /novell/9316-1/q304.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is March 4, 1993  9:01 AM

*** File and Product Name Information ***

   File name from sender   = 'apple2d.igs'
   File creation Date.Time = '880614.154805'
   Model change Date.Time  = ''
   Author                  = 'tom'
   Department              = 'GRAPHICS'
   Product name from sender = 'ALIAS-Version2.4'
   Destination product name = 'Unknown'

*** Parameter Delimiters ***

   Delimiter  = ','
   Terminator = ';'

*** Originating System Data ***

   System ID              = 'Iris-2400 Turbo'
   Preprocessor version   = '1'
   Specification version = 6 (IGES 4.0)

*** Precision levels ***
   Integer bits =    32
   Floating point  -  Exponent =    38  Mantissa =     6
   Double precision - Exponent =   308  Mantissa =    15

*** Global Model Data ***
```

```
Model scale             = 1.0000E+00
Unit flag               = 1
Units                   = 'INCH'
Line weights            = 3
Maximum line thickness  = 1.000000E-02
Minimum line thickness  = 3.333333E-03
Granularity             = 1.000000E-03
Maximum coordinate      = 2.342081E+01
```

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	41
	Blanked	0

Independence:	Independent	39
	Physically Subordinate	0
	Logically Subordinate	2
	Totally Subordinate	0

Entity use:	Geometry	39
	Annotation	2
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0

Hierarchy:	Structure DE applies	3
	Subordinate DE applies	38
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
106	11	0	32	Copious data - Piecewise planar, linear string(2D path)
110	0	0	6	Line
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level Count
   0   41

*** Labeling Information ***

100% of the entities are labeled.

Unlabeled   0

Label   Count

P. SURF   41

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
-	-	-	32	-	6	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

116	118	120	122	124	125	126	128	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted

-   -   -   -   -   -   -   -   User defined

*** Line Widths Used in Data ***

     Weight   Count   Width

 Defaulted   31   (0.0033)
        2   10   (0.0067)

*** Colors Used in Data ***

 Defaulted   0
       Red   8
     Green   33

****
******   ENTITY ANALYSIS   ******
****

*** Entity type: 106

*** Entity type: 110

  --   6 lines averaging 1.362773E-01 units --

*** Entity type: 404

Drawing at D   77 contains 1 views.
Drawing at D   77 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

  Scale of view at D   79 is 1.000000E+00.
Orthographic View entity at D   79 has 0 clipping planes specified.
    XMIN = Not Set   XMAX = Not Set
    YMIN = Not Set   YMAX = Not Set
    ZMIN = Not Set   ZMAX = Not Set

*** Message Summary ***

*** Error Summary ***

    0 fatal errors
    0 severe errors
    0 errors
    0 warnings
    0 cautions
    0 nitpicks
    0 notes

*** End of Analysis of /novell/9316-1/q304.igs ***

10.1.2 Output AutoCAD R1₂
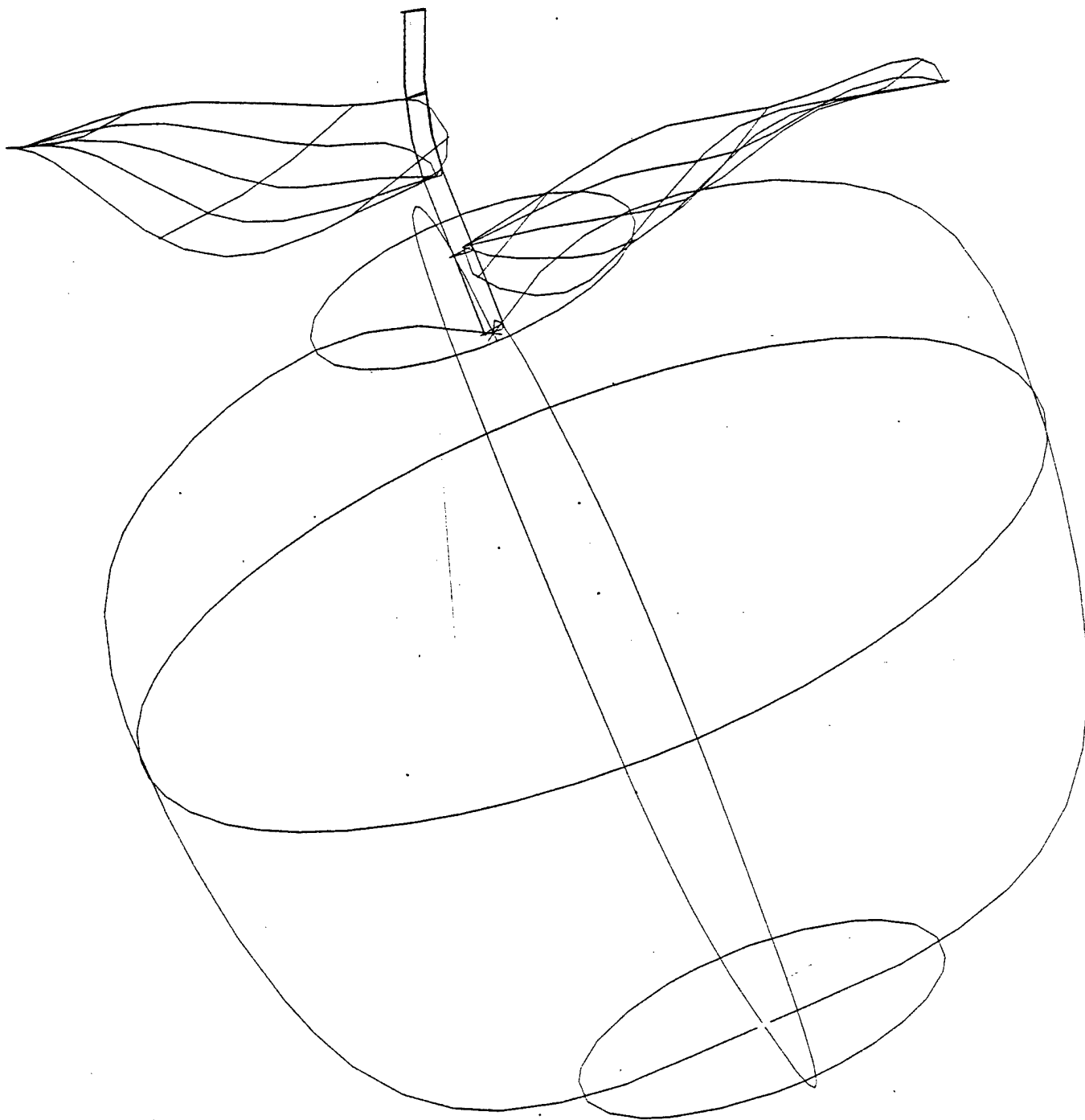
10.1.3   Output IGESView
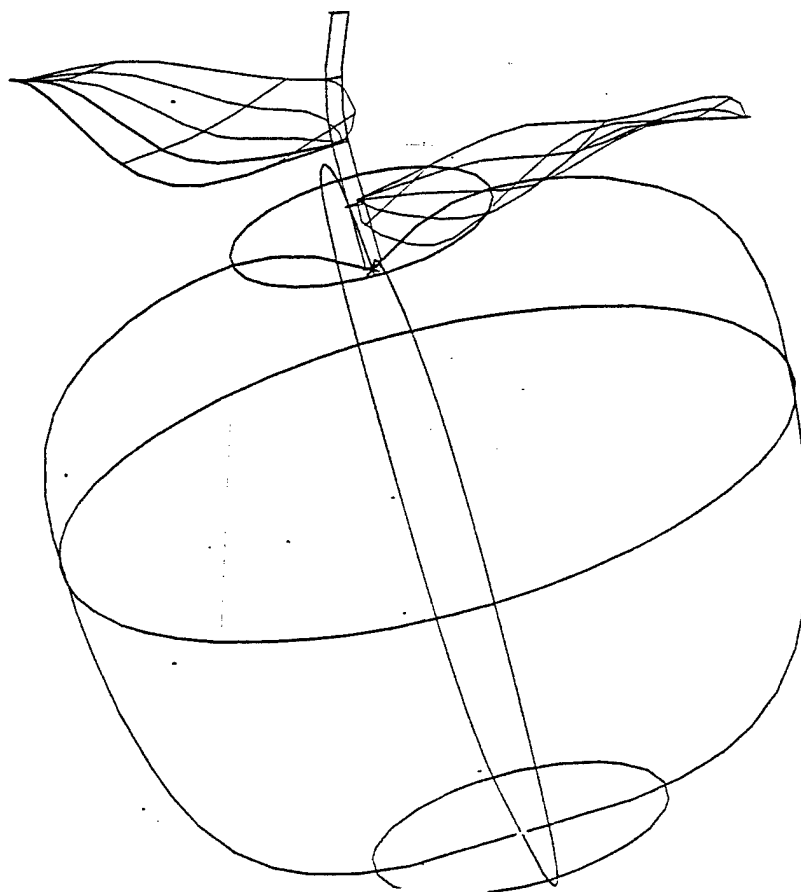
10.2 File Q205

10.2.1 Parser/Verifier Log

```
        *** IGES DATA FILE ANALYSIS ***
        ***.        MARCH 1992        ***
        ***    IGES Data Analysis     ***
        ***       (708) 449-3430      ***

  Input file is /novell/9316-1/q305.igs

  Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

  Today is March 4, 1993  9:01 AM

*** File and Product Name Information ***

    File name from sender     = 'classic2d.igs'
    File creation Date.Time   = '900621.112443'
    Model change Date.Time    = ''
    Author                    = 'Boardhead'
    Department                = 'WINDY'
    Product name from sender  = 'classic_mech.part'
    Destination product name  = 'classic_mech.part'

*** Parameter Delimiters ***

    Delimiter  = ','
    Terminator = ';'

*** Originating System Data ***

    System ID             = 'generic CAD system'
    Preprocessor version  = '1.00'
    Specification version = 6 (IGES 4.0)

*** Precision levels ***
    Integer bits =    32
    Floating point  -  Exponent =    38  Mantissa =    6
    Double precision - Exponent =   308  Mantissa =   15

*** Global Model Data ***

    Model scale           = 1.0000E+00
    Unit flag             = 2
```

```
Units                     =   'MM'
Line weights              =   3
Maximum line thickness    =   1.000000E+00
Minimum line thickness    =   3.333333E-01
Granularity               =   9.000000E-03
Maximum coordinate        =   0.000000E+00
```

CAUTION 2316: Maximum intended coordinate value of 0.000000E+00 will be
defaulted to zero.

Drafting standard applicable to original data is ANSI.

*** Status Flag Summary ***

Blank status:	Visible	2764
	Blanked	0
Independence:	Independent	2760
	Physically Subordinate	1
	Logically Subordinate	3
	Totally Subordinate	0
Entity use:	Geometry	977
	Annotation	1786
	Definition	0
	Other	1
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	1209
	Subordinate DE applies	1555
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
100	0	0	242	Circular arc
104	1	0	15	Conic arc - ellipse
106	11	0	205	Copious data - Piecewise planar, linear string(2D path)
110	0	0	2038	Line
112	0	0	16	Parametric spline curve
124	0	21	11	Transformation matrix

124	0	22	4	
212	0	0	152	General note
212	6	0	67	General note - multiple stack/left justified
212	7	0	1	General note - multiple stack/center justified
212	8	0	10	General note - multiple stack/right justified
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	2749
21	11
22	4

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled   2764

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
237	-	15	205	-	1779	16	-	Solid
4	-	-	-	-	97	-	-	Dashed
1	-	-	-	-	145	-	-	Phantom
-	-	-	-	-	17	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

116	118	120	122	124	125	126	128	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	15	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

130 132 134 136 138 140 142 144

-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	0	(0.3333)
1	556	(0.3333)
2	2208	(0.6667)

*** Colors Used in Data ***

Defaulted	0
Red	976
Green	8
Blue	96
Yellow	1563
Magenta	57
White	64

```
******************************
******  ENTITY ANALYSIS  ******
******************************
```

*** Entity type: 100

*** Entity type: 104

*** Entity type: 106

*** Entity type: 110

CAUTION 2336: Zero length line at D   2177.
  -- 2038 lines averaging 1.682598E+01 units --

*** Entity type: 112

*** Entity type: 124

15 transformation matrices, 15 non-zero translations.
NOTE   2341: 15 matrices contain translation information.

*** Entity type: 212

      468 text strings in data file.
      Average text aspect ratio in file is 1.0159094.
      Minimum text aspect ratio in file is 0.7623553.
      Maximum text aspect ratio in file is 1.1000000.

      FONTS USED IN FILE

      FONT   COUNT   NAME

        1   468   Default ASCII Style

*** Entity type: 404

NITPICK 2074: Entity use flag must be 1 for Drawing entity at D   5523.
Drawing at D   5523 contains 1 views.
NITPICK 2289: View (D   5525) is not logically subordinate to drawing at D
             5523.
Drawing at D   5523 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

  Scale of view at D   5525 is 1.000000E+00.
Orthographic View entity at D   5525 has 0 clipping planes specified.
    XMIN = Not Set   XMAX = Not Set
    YMIN = Not Set   YMAX = Not Set
    ZMIN = Not Set   ZMAX = Not Set

*** Message Summary ***

2011: 1 Invalid subordinate relationships.
2015: 1 Mathematically incorrect definitions.
2016: 1 Invalid entity use flag.

*** Error Summary ***

        0 fatal errors
        0 severe errors
        0 errors
        0 warnings
        2 cautions
        2 nitpicks
        1 notes

*** End of Analysis of /novell/9316-1/q305.igs ***

10.2.2 Output AutoCAD R1₂
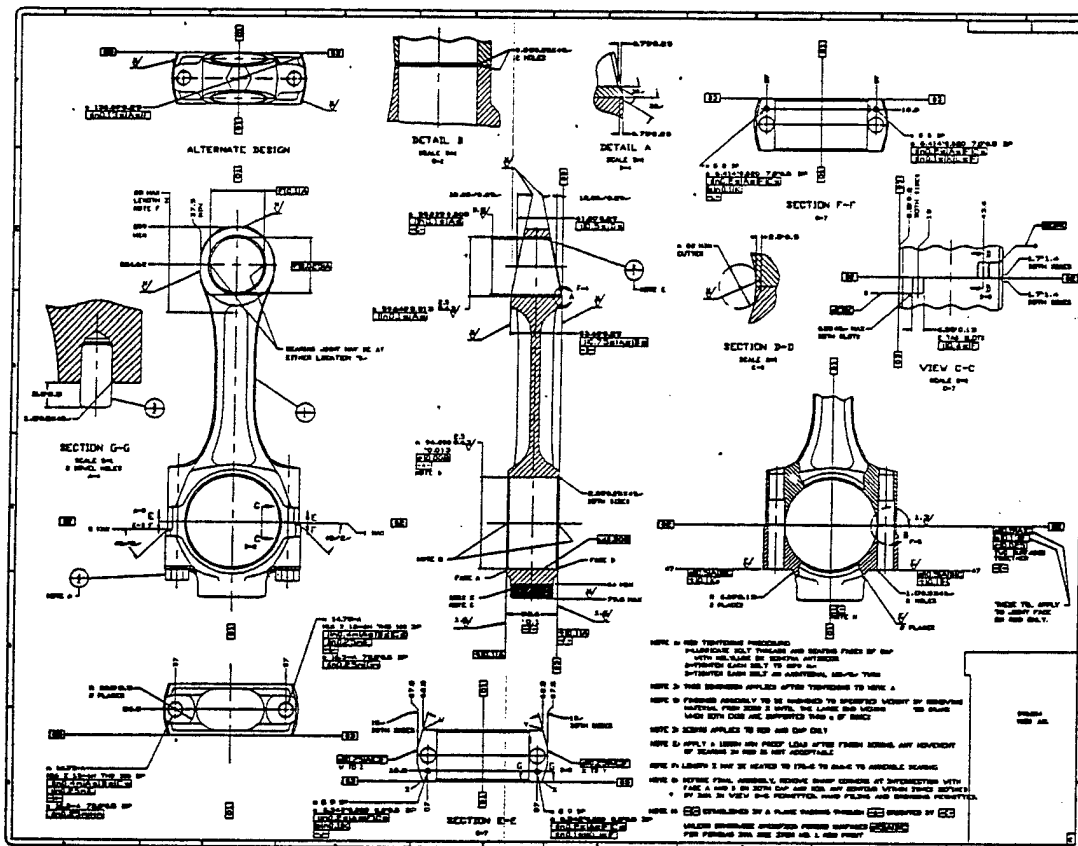
10.2.3 Output IGESView
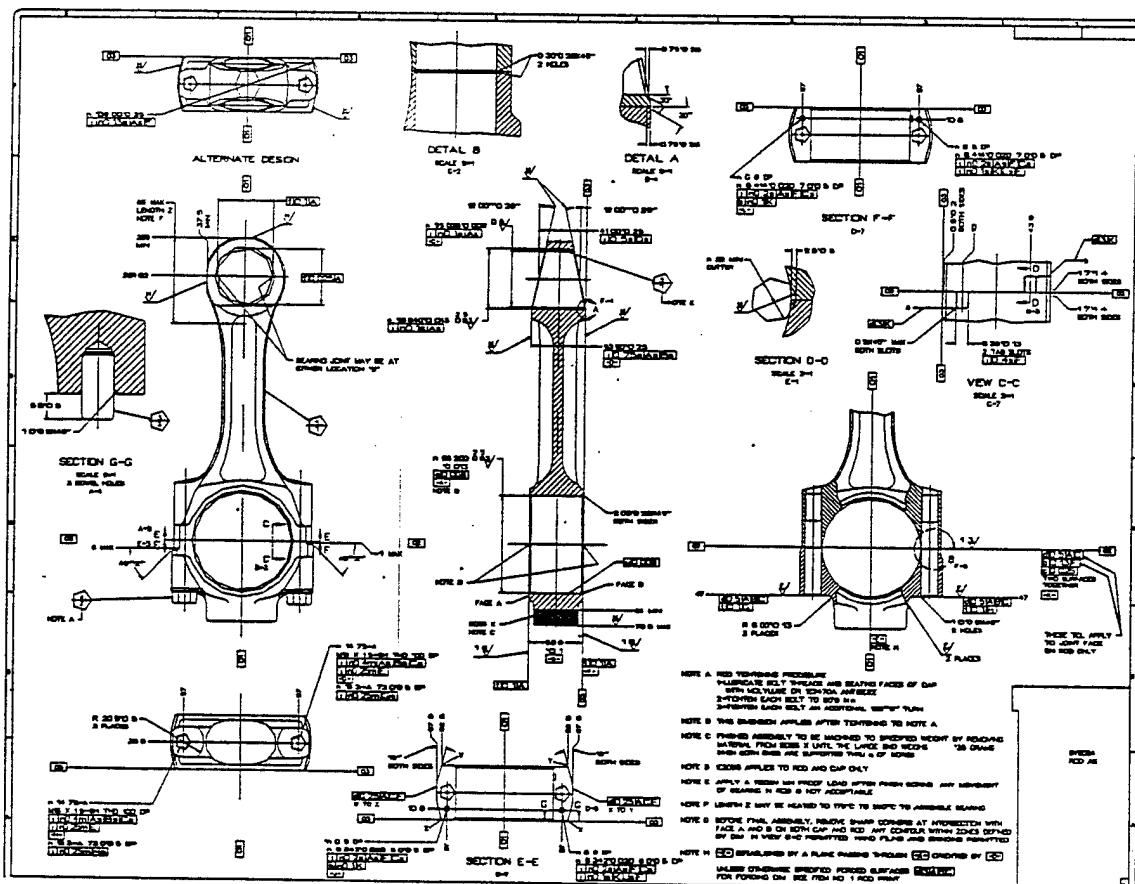
10.2.4 Output iges2draw/IslandDraw

10.3 File Q206

10.3.1 Parser/Verifier Log

```
        *** IGES DATA FILE ANALYSIS ***
        ***        MARCH 1992         ***
        ***    IGES Data Analysis     ***
        ***      (708) 449-3430       ***

 Input file is /novell/9316-1/q306.igs

 Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

 Today is March 4, 1993  9:01 AM

*** File and Product Name Information ***

    File name from sender   = 'IENTITY'
    File creation Date.Time  = '891031.080000'
    Model change Date.Time   = ''
    Author                   = 'KASSEL'
    Department               = 'Air Force CALS Test Network'
    Product name from sender = 'IENTITY'
    Destination product name = 'IENTITY'

*** Parameter Delimiters ***

    Delimiter  = ','
    Terminator = ';'

*** Originating System Data ***

    System ID             = 'NONE'
    Preprocessor version  = 'TEST'
    Specification version = 6 (IGES 4.0)

*** Precision levels ***
    Integer bits =    32
    Floating point  -  Exponent =    38  Mantissa =     6
    Double precision - Exponent =   308  Mantissa =    15

*** Global Model Data ***

    Model scale           = 1.0000E+00
    Unit flag             = 1
```

```
Units                      =   'INCH'
Line weights               =   8
Maximum line thickness     =   1.600000E-02
Minimum line thickness     =   2.000000E-03
Granularity                =   1.000000E-02
Maximum coordinate         =   2.200000E+01
```

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

| Blank status: | Visible | 148 |
| | Blanked | 0 |

Independence:	Independent	125
	Physically Subordinate	20
	Logically Subordinate	3
	Totally Subordinate	0

Entity use:	Geometry	84
	Annotation	54
	Definition	10
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0

Hierarchy:	Structure DE applies	6
	Subordinate DE applies	142
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
0	0	0	37	Null entity
100	0	0	3	Circular arc
102	0	0	2	Composite curve
104	0	0	1	Conic arc - general form
104	1	0	1	Conic arc - ellipse
104	2	0	1	Conic arc - hyperbola
104	3	0	1	Conic arc - parabola
106	11	0	1	Copious data - Piecewise planar, linear string(2D path)

106	63	0	1	Simple closed planar curve
110	0	0	27	Line
112	0	0	2	Parametric spline curve
124	0	0	5	Transformation matrix
126	0	0	1	Rational B-spline curve
126	1	0	1	Rational B-spline curve - Line
126	2	0	1	Rational B-spline curve - Circular arc
126	3	0	1	Rational B-spline curve - Elliptical arc
126	4	0	1	Rational B-spline curve - Parabolic arc
126	5	0	1	Rational B-spline curve - Hyperbolic arc
212	0	0	38	General note
212	1	0	1	General note - dual stack dimension
212	2	0	2	General note - imbedded font change dimension
212	3	0	1	General note - superscripted dimension
212	4	0	1	General note - subscripted dimension
212	5	0	1	General note - super-/sub-scripted dimension
212	6	0	1	General note - multiple stack/left justified
212	7	0	1	General note - multiple stack/center justified
212	8	0	1	General note - multiple stack/right justified
212	100	0	1	General note - simple fractional dimension
212	101	0	1	General note - dual stack fractional dimension
212	102	0	1	General note - imbedded font change/double fractio dimension
212	105	0	1	General note - super-/sub-scripted fractional dime
230	0	0	1	Sectioned area (Standard Crosshatching)
308	0	0	1	Subfigure definition
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
406	18	0	1	Property - Intercharacter spacing
408	0	0	1	Single subfigure instance
410	0	0	1	View - Orthographic parallel
412	0	0	1	Rectangular subfigure instance
414	0	0	1	Circular subfigure instance

*** Entity Count by Level ***

Level   Count
    0   148

*** Labeling Information ***

  25% of the entities are labeled.

  Unlabeled   111

*** Line Fonts Used in Data ***

	100	102	104	106	108	110	112	114	
	-	-	-	-	-	-	-	-	Undefined
	3	2	4	2	-	27	2	-	Solid
	-	-	-	-	-	-	-	-	Dashed
	-	-	-	-	-	-	-	-	Phantom
	-	-	-	-	-	-	-	-	Center-line
	-	-	-	-	-	-	-	-	Dotted
	-	-	-	-	-	-	-	-	User defined

	116	118	120	122	124	125	126	128	
	-	-	-	-	5	-	-	-	Undefined
	-	-	-	-	-	-	6	-	Solid
	-	-	-	-	-	-	-	-	Dashed
	-	-	-	-	-	-	-	-	Phantom
	-	-	-	-	-	-	-	-	Center-line
	-	-	-	-	-	-	-	-	Dotted
	-	-	-	-	-	-	-	-	User defined

	130	132	134	136	138	140	142	144	
	-	-	-	-	-	-	-	-	Undefined
	-	-	-	-	-	-	-	-	Solid
	-	-	-	-	-	-	-	-	Dashed
	-	-	-	-	-	-	-	-	Phantom
	-	-	-	-	-	-	-	-	Center-line
	-	-	-	-	-	-	-	-	Dotted
	-	-	-	-	-	-	-	-	User defined

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	111	(0.0020)

*** Colors Used in Data ***

Defaulted	15
Red	96

```
******************************
******  ENTITY ANALYSIS  ******
******************************
```

*** Entity type: 0

NOTE   2307: Entity type not checked.

 *** Entity type: 100

 *** Entity type: 102

 *** Entity type: 104

 *** Entity type: 106

 *** Entity type: 110

   --   27 lines averaging 7.156251E+00 units --

 *** Entity type: 112

 *** Entity type: 124

5 transformation matrices, 5 non-zero translations.
NOTE   2341: 5 matrices contain translation information.

 *** Entity type: 126

 *** Entity type: 212

        129 text strings in data file.
        Average text aspect ratio in file is 0.9982875.
        Minimum text aspect ratio in file is 0.7978667.
        Maximum text aspect ratio in file is 1.4857143.

        FONTS USED IN FILE

        FONT   COUNT   NAME

           1   127   Default ASCII Style
        1002   2   Symbol Font 2

 *** Entity type: 230

 *** Entity type: 308

 Subfigure name at D   25: 'PERSON'.
    Number of included entities = 6.

***

 *** Entity type: 404

Drawing at D   287 contains 1 views.
Drawing at D   287 contains 0 annotation entities.

 *** Entity type: 406

 *** Entity type: 408

  Subfigure instance at D   263 references subfigure at D   25.

 *** Entity type: 410

  Scale of view at D   55 is 1.000000E+00.
Orthographic View entity at D   55 has 0 clipping planes specified.
    XMIN = Not Set   XMAX = Not Set
    YMIN = Not Set   YMAX = Not Set
    ZMIN = Not Set   ZMAX = Not Set

 *** Entity type: 412

  Rectangular subfigure instance at D   291 references entity at D   25.

 *** Entity type: 414

  Circular subfigure instance at D   293 references entity at D   25.
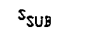
 *** Message Summary ***

 *** Error Summary ***
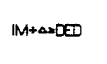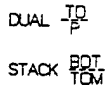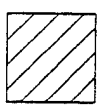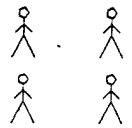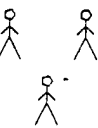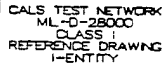
    0 fatal errors
    0 severe errors
    0 errors
    0 warnings
    0 cautions
    0 nitpicks
    2 notes

 *** End of Analysis of /novell/9316-1/q306.igs ***
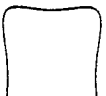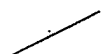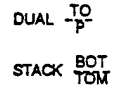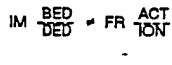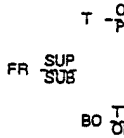
10.3.2 Output AutoCAD R1₂

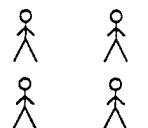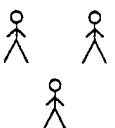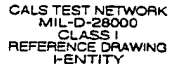|							
CIRCULAR ARC (100)	COMPOSITE CURVE (102)	CONIC ARC - GENERAL (104 FORM 0)	CONIC ARC - ELLIPSE (104 FORM 1)	CONIC ARC - HYPERBOLA (104 FORM 2)	CONIC ARC - PARABOLA (104 FORM 3)	LINEAR PLANAR CURVE (106 FORM 11)	SIMPLE CLOSED AREA (106 FORM 63)
LINE (110)	PARAMETRIC SPLINE CURVE (112)	TRANSFORMATION MATRIX (*) (124 FORM 0)	RATIONAL B-SPLINE CURVE (126 FORM 0)	RATIONAL B-SPLINE CURVE LINE (126 FORM 1)	RATIONAL B-SPLINE CURVE CIRCULAR ARC (126 FORM 2)	RATIONAL B-SPLINE CURVE ELLIPTICAL ARC (126 FORM 3)	RATIONAL B-SPLINE CURVE PARABOLIC ARC (126 FORM 4)
RATIONAL B-SPLINE CURVE HYPERBOLIC ARC (126 FORM 5)	SIMPLE — GENERAL NOTE - SIMPLE (212 FORM 0)	DUAL STACK — NOTE - DUAL STACK (212 FORM 1)	IM+Δ2DED — NOTE - IMBEDDED FONT CHANGE (212 FORM 2)	S SUPER — NOTE - SUPERSCRIPT (212 FORM 3)	S SUB — NOTE - SUBSCRIPT (212 FORM 4)	S SUPER SUB — NOTE - SUPER/SUB SCRIPT (212 FORM 5)	M STACK LEFT — NOTE - MULTI STACK LEFT JUST (212 FORM 6)
M STACK CENTER — NOTE - MULTI STACK CENT JUST (212 FORM 7)	M STACK RIGHT — NOTE - MULTI STACK RIGHT JUST (212 FORM 8)	S FRAC TION — NOTE - SIMPLE FRACTION (212 FORM 9)	DUAL $\frac{TO}{P}$ STACK $\frac{BOT}{TOM}$ — NOTE - DUAL STACK FRACTION (212 FORM 9D)	IM $\frac{BED}{DED}$ ≠FR $\frac{ACT}{ION}$ — NOTE - FONT/DOUBLE FRACTION (212 FORM 9D)	FR $\frac{SUP}{SUB}$ BO $\frac{TT}{OM}$ T $\frac{D}{P}$ — NOTE - SUPER/SUB FRACTION (212 FORM 9D)	— SECTIONED AREA (230)	SPACING — INTERCHARACTER SPACING (406 FORM 19)
SINGLE SUBFIGURE INSTANCE (408)	RECTANGULAR SUBFIGURE INSTANCE (412)	CIRCULAR SUBFIGURE INSTANCE (414)					CALS TEST NETWORK MIL-D-28000 CLASS I REFERENCE DRAWING I-ENTITY

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10.3.3 Output IGESView

CIRCULAR ARC (100)	COMPOSITE CURVE (102)	CONIC ARC - GENERAL (104 FORM 0)	CONIC ARC - ELLIPSE (104 FORM 1)	CONIC ARC - HYPERBOLA (104 FORM 2)	CONIC ARC - PARABOLA (104 FORM 3)	LINEAR PLANAR CURVE (106 FORM 11)	SIMPLE CLOSED AREA (106 FORM 63)
LINE (110)	PARAMETRIC SPLINE CURVE (112)	TRANSFORMATION MATRIX D=1 (124 FORM 0)	RATIONAL B-SPLINE CURVE (126 FORM 0)	RATIONAL B-SPLINE CURVE LINE (126 FORM 1)	RATIONAL B-SPLINE CURVE CIRCULAR ARC (126 FORM 2)	RATIONAL B-SPLINE CURVE ELLIPTICAL ARC (126 FORM 3)	RATIONAL B-SPLINE CURVE PARABOLIC ARC (126 FORM 4)
RATIONAL B-SPLINE CURVE HYPERBOLIC ARC (126 FORM 5)	SIMPLE — GENERAL NOTE - SIMPLE (212 FORM 0)	DUAL STACK — NOTE - DUAL STACK (212 FORM 1)	IM+△»DED — NOTE - IMBEDDED FONT CHANGE (212 FORM 2)	S^{SUPER} — NOTE - SUPERSCRIPT (212 FORM 3)	S_{SUB} — NOTE - SUBSCRIPT (212 FORM 4)	S^{SUPER}_{SUB} — NOTE - SUPER/SUB SCRIPT (212 FORM 5)	M STACK LEFT — NOTE - MULTI STACK LEFT JUST (212 FORM 6)
M STACK CENTER — NOTE - MULTI STACK CENT JUST (212 FORM 7)	M STACK RIGHT — NOTE - MULTI STACK RIGHT JUST (212 FORM 8)	$S\frac{FRAC}{TION}$ — NOTE - SIMPLE FRACTION (212 FORM 100)	DUAL $\frac{TO}{P}$ STACK $\frac{BOT}{TOM}$ — NOTE - DUAL STACK FRACTION (212 FORM 101)	IM $\frac{BED}{DED}$ «FR $\frac{ACT}{ION}$ — NOTE - FONT/DOUBLE FRACTION (212 FORM 102)	T $-\frac{O}{P}-$ FR $\frac{SUP}{SUB}$ BO $\frac{TT}{OM}$ — NOTE - SUPER/SUB FRACTION (212 FORM 105)	SECTIONED AREA (230)	SPACING — INTERCHARACTER SPACING (406 FORM 18)
SINGLE SUBFIGURE INSTANCE (408)	RECTANGULAR SUBFIGURE INSTANCE (412)	CIRCULAR SUBFIGURE INSTANCE (414)					CALS TEST NETWORK ML-D-28000 CLASS i REFERENCE DRAWING I-ENTITY

10.3.4 Output iges2draw/IslandDraw

CIRCULAR ARC (100)	COMPOSITE CURVE (102)	CONIC ARC - GENERAL (104 FORM 0)	CONIC ARC - ELLIPSE (104 FORM 1)	CONIC ARC - HYPERBOLA (104 FORM 2)	CONIC ARC - PARABOLA (104 FORM 3)	LINEAR PLANAR CURVE (106 FORM 11)	SIMPLE CLOSED AREA (106 FORM 63)
LINE (110)	PARAMETRIC SPLINE CURVE (112)	TRANSFORMATION MATRIX D=1 (124 FORM 0)	RATIONAL B-SPLINE CURVE (126 FORM 0)	RATIONAL B-SPLINE CURVE LINE (126 FORM 1)	RATIONAL B-SPLINE CURVE CIRCULAR ARC (126 FORM 2)	RATIONAL B-SPLINE CURVE ELLIPTICAL ARC (126 FORM 3)	RATIONAL B-SPLINE CURVE PARABOLIC ARC (126 FORM 4)
RATIONAL B-SPLINE CURVE HYPERBOLIC ARC (126 FORM 5)	SIMPLE $_S^M_I_L_E$ GENERAL NOTE - SIMPLE (212 FORM 0)	DUAL STACK NOTE - DUAL STACK (212 FORM 1)	IM+A>DED NOTE - IMBEDDED FONT CHANGE (212 FORM 2)	s^{SUPER} NOTE - SUPERSCRIPT (212 FORM 3)	s_{SUB} NOTE - SUBSCRIPT (212 FORM 4)	s^{SUPER}_{SUB} NOTE - SUPER/SUB SCRIPT (212 FORM 5)	M STACK LEFT NOTE - MULTI STACK LEFT JUST (212 FORM 6)
M STACK CENTER NOTE - MULTI STACK CENT JUST (212 FORM 7)	M STACK RIGHT NOTE - MULTI STACK RIGHT JUST (212 FORM 8)	s^{FRAC}_{TION} NOTE - SIMPLE FRACTION (212 FORM 100)	DUAL $-\frac{TO}{P}-$ STACK $\frac{BOT}{TOM}$ NOTE - DUAL STACK FRACTION (212 FORM 101)	IM $\frac{BED}{DED}$ = FR $\frac{ACT}{TON}$ NOTE - FONT/DOUBLE FRACTION (212 FORM 102)	T $-\frac{O}{P}-$ FR $\frac{SUP}{SUB}$ BO $\frac{TT}{OM}$ NOTE - SUPER/SUB FRACTION (212 FORM 105)	SECTIONED AREA (230)	SPACING INTERCHARACTER SPACING (406 FORM 18)
SINGLE SUBFIGURE INSTANCE (408)	RECTANGULAR SUBFIGURE INSTANCE (412)	CIRCULAR SUBFIGURE INSTANCE (414)					CALS TEST NETWORK MIL-D-28000 CLASS I REFERENCE DRAWING I-ENTITY

10.4 File Q207

10.4.1 Parser/Verifier Log

```
        ***  IGES DATA FILE ANALYSIS  ***
        ***          MARCH 1992       ***
        ***     IGES Data Analysis    ***
        ***        (708) 449-3430     ***

 Input file is /novell/9316-1/q307.igs

 Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

 Today is March 4, 1993  9:02 AM

*** File and Product Name Information ***

   File name from sender    = 'LGTABLE'
   File creation Date.Time   = '890707.090000'
   Model change Date.Time    = ''
   Author                    = 'FARRELL'
   Department                = 'Air Force CALS Test Network'
   Product name from sender  = 'LGTABLE'
   Destination product name  = 'LGTABLE'

*** Parameter Delimiters ***

   Delimiter  = ','
   Terminator = ';'

*** Originating System Data ***

   System ID             = 'NONE'
   Preprocessor version  = 'TEST'
   Specification version = 6 (IGES 4.0)

*** Precision levels ***
   Integer bits =    32
   Floating point   -  Exponent =    38  Mantissa =     6
   Double precision - Exponent =   308  Mantissa =    15

*** Global Model Data ***

   Model scale           = 1.0000E+00
   Unit flag             = 1
```

```
    Units                    =  'IN'
    Line weights             =  25
    Maximum line thickness   =  1.000000E-01
    Minimum line thickness   =  4.000000E-03
    Granularity              =  1.000000E-04
    Maximum coordinate       =  2.000000E+01
```

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

```
Blank status: Visible                       272
              Blanked                         0


Independence: Independent                   259
              Physically Subordinate         11
              Logically Subordinate           2
              Totally Subordinate             0


Entity use:   Geometry                      218
              Annotation                     54
              Definition                      0
              Other                           0
              Logical/Positional              0
              2D parametric                   0
              Not Specified                   0


Hierarchy:    Structure DE applies            1
              Subordinate DE applies        271
              Hierarchy property applies      0
              Not Specified                   0
```

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
0	0	0	4	Null entity
100	0	0	85	Circular arc
102	0	0	2	Composite curve
104	0	0	5	Conic arc - general form
110	0	0	116	Line
112	0	0	12	Parametric spline curve
124	0	0	3	Transformation matrix
212	0	0	37	General note
230	0	0	5	Sectioned area (Standard Crosshatching)

```
    404        0        0        1      Drawing
    406       16        0        1      Property - Drawing size
    410        0        0        1      View - Orthographic parallel
```

*** Entity Count by Level ***

```
    Level   Count
        0     272
```

*** Labeling Information ***

99% of the entities are labeled.

```
    Unlabeled        1
```

Label	Count	Label	Count	Label	Count
VIEW	1*	DRAWING	1*	TX0044	5*
TX0045	5*	LN0141	1*	LN0142	1*
LN0143	1*	LN0144	1*	LN0145	1*

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

Label	Count	Label	Count	Label	Count
TX0080	1*	CC0001	1*	CC0002	1*
SA0001	1*	SA0002	1*	SA0003	1*
SA0004	1*	SA0005	1*		

NITPICK 2327: One or more of the flagged entity labels are not right-justified.

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
85	2	5	-	-	107	12	-	Solid
-	-	-	-	-	9	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

116	118	120	122	124	125	126	128	
-	-	-	-	3	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom

```
-    -    -    -    -    -    -    -    Center-line
-    -    -    -    -    -    -    -    Dotted
-    -    -    -    -    -    -    -    User defined

130  132  134  136  138  140  142  144

-    -    -    -    -    -    -    -    Undefined
-    -    -    -    -    -    -    -    Solid
-    -    -    -    -    -    -    -    Dashed
-    -    -    -    -    -    -    -    Phantom
-    -    -    -    -    -    -    -    Center-line
-    -    -    -    -    -    -    -    Dotted
-    -    -    -    -    -    -    -    User defined
```

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	58	(0.0040)
3	22	(0.0120)
2	126	(0.0080)
4	62	(0.0160)

*** Colors Used in Data ***

Defaulted	184
Blue	22
Cyan	62

```
******************************
******  ENTITY ANALYSIS  ******
******************************
```

*** Entity type: 0

NOTE   2307: Entity type not checked.

*** Entity type: 100

*** Entity type: 102

*** Entity type: 104

*** Entity type: 110

-- 116 lines averaging 5.327616E-01 units --

*** Entity type: 112

*** Entity type: 124

3 transformation matrices, 3 non-zero translations.
NOTE   2341: 3 matrices contain translation information.

*** Entity type: 212

     47 text strings in data file.
     Average text aspect ratio in file is 0.7899535.
     Minimum text aspect ratio in file is 0.7579661.
     Maximum text aspect ratio in file is 1.0525425.

     FONTS USED IN FILE

     FONT   COUNT   NAME

       1   47   Default ASCII Style

*** Entity type: 230

*** Entity type: 404

Drawing at D   5 contains 1 views.
Drawing at D   5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

  Scale of view at D   1 is 1.000000E+00.
Orthographic View entity at D   1 has 0 clipping planes specified.
   XMIN = Not Set   XMAX = Not Set
   YMIN = Not Set   YMAX = Not Set
   ZMIN = Not Set   ZMAX = Not Set

*** Message Summary ***

*** Error Summary ***

    0 fatal errors
    0 severe errors
    0 errors
    0 warnings
    0 cautions
    1 nitpicks
    2 notes

*** End of Analysis of /novell/9316-1/q307.igs ***

10.4.2 Output AutoCAD R1$_2$
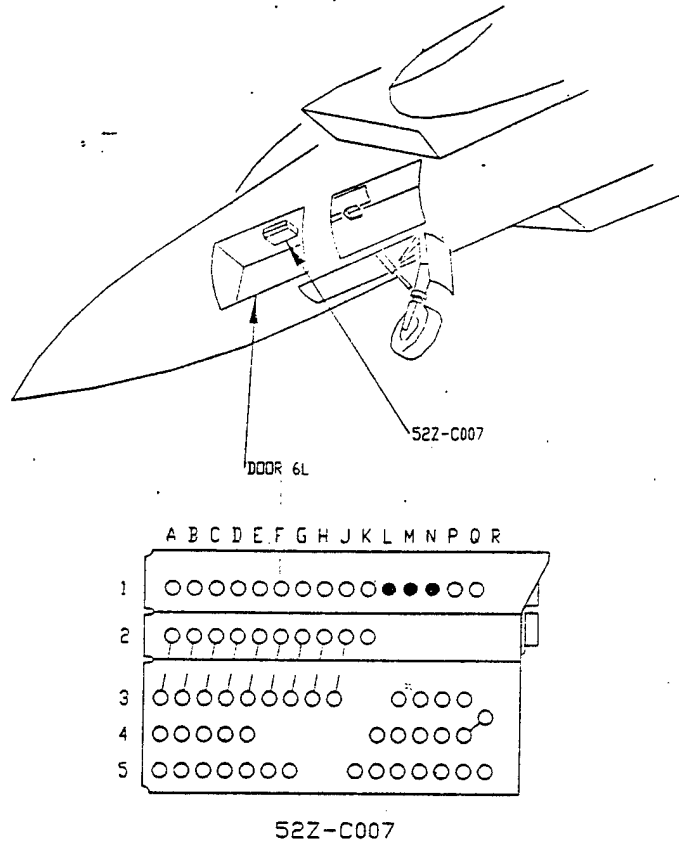
52Z-C007

52Z-C007	ESSENTIAL CIRCUIT BREAKER PANEL NO. 1		(24-50-12)
REF DES	ZONE	NOMENCLATURE	BUS
41CBC033	L1	R MLG VDV PVR 28VDC	ESS 28VDC
41CBC034	M1	L MLG VDV PVR 28VDC	ESS 28VDC
42CBC005	N1	LDG GR PDS IND 28VDC	ESS 28VDC

CALS Test Network LGTABLE Reference Illustration

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10.4.3 Output IGESView
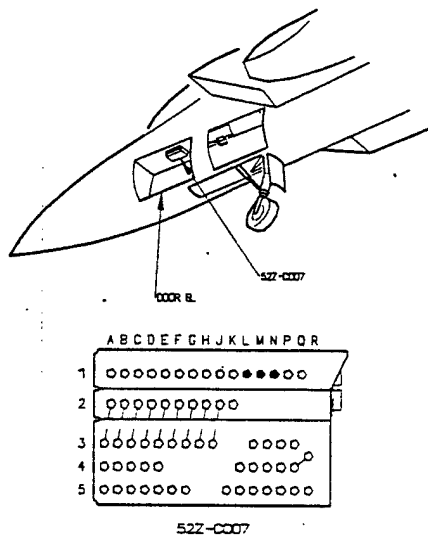
52Z-C007

52Z-C007		ESSENTIAL CIRCUIT BREAKER PANEL NO. 1		(24-50-12)
REF DES	ZONE	NOMENCLATURE		BUS
41CBC033	L1	R MLG WOW PWR	28VDC	ESS 28VDC
41CBC034	M1	L MLG WOW PWR	28VDC	ESS 28VDC
42CBC005	M1	LDG GR POS IND	28VDC	ESS 28VDC

10.4.4   Output iges2draw/IslandDraw

DOOR 6L

52Z-C007

A B C D E F G H J K L M N P Q R

52Z-C007

52Z-C007		ESSENTIAL CIRCUIT BREAKER PANEL NO. 1		(24-50-12)
REF DES	ZONE	NOMENCLATURE		BUS
41CBC033	L1	R MLG WOW PWR	28VDC	ESS 28VDC
41CBC034	M1	L MLG WOW PWR	28VDC	ESS 28VDC
42CBC005	N1	LDG GR POS IND	28VDC	ESS 28VDC

CALS Test Network LGTABLE Reference Illustration

11.   Appendix C - Detailed SGML Analysis

11.1   Datalogics Parser Log

11.1.1   DTD Parser Log

```
              SGML Document Type Definition Parser
                         Version 3.36
         Copyright (c) Datalogics 1988, 1989, 1990, 1991
                  An SGML System Conforming to
               International Standard ISO 8879
               Standard Generalized Markup Language

Log file: '9316.LOG'
SDO File: 'ctndecl.sdo'
Namecase General is yes.
Namecase Entity is no.
Parsing DTD file: '9316.dtd'

DTD0095: Start tag for element 'DATABASE' cannot be omitted if the
         element had declared content (CDATA, RCDATA, EMPTY).
DTD0095: Start tag for element 'MEDIUM' cannot be omitted if the
         element had declared content (CDATA, RCDATA, EMPTY).
DTD0096: The generic ID SHORTTITLE has not been used in any content
         model, inclusion, or as a doctype element.
DTD0096: The generic ID CONTASSURPG has not been used in any content
         model, inclusion, or as a doctype element.
DTD0096: The generic ID REFDOC has not been used in any content
         model, inclusion, or as a doctype element.
DTD0096: The generic ID CFGPGE has not been used in any content
         model, inclusion, or as a doctype element.
DTD0096: The generic ID COVERINDEX has not been used in any content
         model, inclusion, or as a doctype element.
DTD0096: The generic ID STALOC has not been used in any content
         model, inclusion, or as a doctype element.
DTD0096: The generic ID TESTCODE has not been used in any content
         model, inclusion, or as a doctype element.
This DTD conforms to the ISO 8879 standard

DTO file '9316.DTO' created

closing statistics:
    Capacity points:                 71912
    Bytes of DTO file string space:  12664
```

SGML descriptor blocks: 7101

Document Type Definition is compliant and parsed normally.

Program status code: 0.

12. Appendix D - Detailed Raster Analysis

12.1 File R104

12.1.1 Output Preview

U.S. ARMY MATERIEL COMMAND
U.S. ARMY MISSILE COMMAND
REDSTONE ARSENAL, ALABAMA

TITLE OSCILLATOR, VOLTAGE CONTROLLED-COHO-A3A13

USAMICOM ECP 63343

DATE 16 NOV 70 REV

PARTS LIST

PL 10677287

CODE IDENTIFICATION NO. 18876

SHEET 3 OF

FIND NO.	PART OR IDENTIFICATION NO.	DRAWING OR SPECIFICATION NO.	NOMENCLATURE	QUANTITY
	10181751-207	10181751	RESISTOR	
	10181751-208	10181751	RESISTOR	
	10181751-209	10181751	RESISTOR	
	10181751-210	10181751	RESISTOR	
	10181751-211	10181751	RESISTOR	
	10181751-212	10181751	RESISTOR	
	10181751-213	10181751	RESISTOR	
	10181751-214	10181751	RESISTOR	
	10181751-215	10181751	RESISTOR	
2	10181752-261	10181752	RESISTOR	1
3	10181752-357	10181752	RESISTOR	1
4	10181751-147	10181751	RESISTOR	2
5	10180306-239	10180306	RESISTOR	2
6	10181751-133	10181751	RESISTOR	1
7	10181751-166	10181751	RESISTOR	1
8	10180328-418	10180328	RESISTOR	1
9	10181752-283	10181752	RESISTOR	1
10	10181752-298	10181752	RESISTOR	1
11	10181752-306	10181752	RESISTOR	1
12	10181752-297	10181752	RESISTOR	1
13	10181752-289	10181752	RESISTOR	1
14	10181752-271	10181752	RESISTOR	1
15	10181752-310	10181751	RESISTOR	1
16	10181751-55	10181751	RESISTOR	
	10181751-1	10181751	RESISTOR	
	10181751-2	10181751	RESISTOR	
	10181751-3	10181751	RESISTOR	
	10181751-4	10181751	RESISTOR	
	10181751-5	10181751	RESISTOR	
	10181751-6	10181751	RESISTOR	

EFFECTIVITY FROM — TO | ZONE | NOTES OR REMARKS

12.1.2 Output HiJaak for Windows

			PARTS	PL 10677267	
U.S. ARMY MATERIEL COMMAND U.S. ARMY MISSILE COMMAND REDSTONE ARSENAL, ALABAMA			PARTS LIST	CODE IDENTIFICATION NO. 18876	

			USAMICOM 63343 ECP	DATE 16 NOV 70 REV - SHEET 3 OF	
TITLE OSCILLATOR,VOLTAGE CONTROLLED-COHO-A3A13					

FIND NO.	PART OR IDENTIFICATION NO.	DRAWING OR SPECIFICATION NO.	NOMENCLATURE	QUANTITY	PL	MI	EFFECTIVITY FROM	TO	ZONE	NOTES OR REMARKS
	10181751-207	10181751	RESISTOR							
	10181751-208	10181751	RESISTOR							
	10181751-209	10181751	RESISTOR							
	10181751-210	10181751	RESISTOR							
	10181751-211	10181751	RESISTOR							
	10181751-212	10181751	RESISTOR							
	10181751-213	10181751	RESISTOR							
	10181751-214	10181751	RESISTOR							
	10181751-215	10181751	RESISTOR							
2	10181752-261	10181752	RESISTOR	1						
3	10181752-357	10181752	RESISTOR	1						
4	10181751-147	10181751	RESISTOR	1						
5	10180306-239	10180306	RESISTOR	2						
6	10181751-133	10181751	RESISTOR	2						
7	10181751-166	10181751	RESISTOR	1						
8	10180328-418	10180328	RESISTOR	1						
9	10181752-283	10181752	RESISTOR	1						
10	10181752-298	10181752	RESISTOR	1						
11	10181752-306	10181752	RESISTOR	1						
12	10181752-297	10181752	RESISTOR	1						
13	10181752-289	10181752	RESISTOR	1						
14	10181752-271	10181752	RESISTOR	1						
15	10181752-310	10181752	RESISTOR	1						
16	10181751-55	10181751	RESISTOR	1						1
	10181751-1	10181751	RESISTOR							
	10181751-2	10181751	RESISTOR							
	10181751-3	10181751	RESISTOR							
	10181751-4	10181751	RESISTOR							
	10181751-5	10181751	RESISTOR							
	10181751-6	10181751	RESISTOR							

13. Appendix E - Detailed CGM Analysis

13.1 File C204

13.1.1 Parser Log MetaCheck

13.1.2 validcgm Log

```
Analysis for file c204.cgm using table table
MILSPEC 28003 error: illegal hatch index
(132, 1392)      (5, 24, 2)     Hatch Index 6
(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 3) occurred 1 time
(1, 4) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 11) occurred 1 time
(1, 13) occurred 1 time
(2, 2) occurred 1 time
(2, 3) occurred 1 time
(2, 4) occurred 1 time
(2, 5) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(4, 1) occurred 15 times
(4, 2) occurred 1 time
(4, 3) occurred 5 times
(4, 4) occurred 46 times
(4, 5) occurred 3 times
(4, 6) occurred 1 time
(4, 7) occurred 1 time
(4, 8) occurred 1 time
(4, 9) occurred 1 time
(4, 11) occurred 4 times
(4, 12) occurred 1 time
(4, 13) occurred 1 time
```

```
(4, 14) occurred 1 time
(4, 15) occurred 1 time
(4, 16) occurred 1 time
(4, 17) occurred 1 time
(4, 18) occurred 1 time
(4, 19) occurred 1 time
(5, 2) occurred 10 times
(5, 3) occurred 6 times
(5, 4) occurred 4 times
(5, 6) occurred 5 times
(5, 7) occurred 5 times
(5, 8) occurred 5 times
(5, 10) occurred 4 times
(5, 11) occurred 1 time
(5, 12) occurred 3 times
(5, 13) occurred 3 times
(5, 14) occurred 8 times
(5, 15) occurred 7 times
(5, 16) occurred 5 times
(5, 17) occurred 4 times
(5, 22) occurred 3 times
(5, 23) occurred 8 times
(5, 24) occurred 8 times
(5, 28) occurred 7 times
(5, 29) occurred 7 times
(5, 30) occurred 3 times
(5, 34) occurred 1 time
```

13.1.3 Output Harvard Graphics
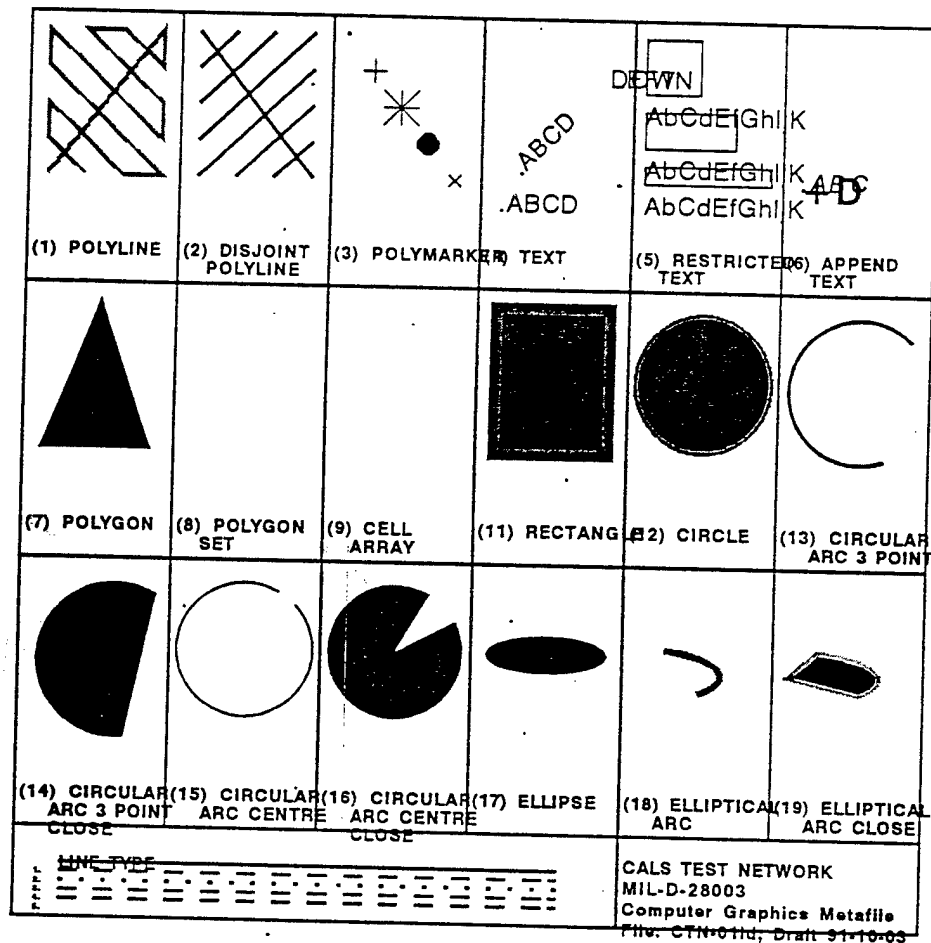
HG305 - C204 - 9316

13.1.4   Output IslandDraw

				AbCdEfGhIjK	
			.ABCD	AbCdEfGhIjK	
			.ABCD	AbCdEfGhIjK	
ⅰ POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
ⅰ POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 POINT
f) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTICAL ARC CLOSE

LINE TYPE

CALS TEST NETWORK
MIL-D-28003
Computer Graphics Metafile
File: CTN-01ld, Draft 91-10-03

13.1.5 Output cgm2draw/IslandDraw

.) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
') POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 POINT
.4) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE . CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTICAL ARC CLOSE

LINE TYPE

CALS TEST NETWORK
MIL-D-28003
Computer Graphics Metafile
File: CTN-01Id, Draft 91-10-03

13.2   File C205

13.2.1   Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:44:53

Metafile Examined      : i:\9316-1\c205.cgm

Pictures Examined      : All
Elements Examined      : All
Bytes     Examined     : All


====================== Trace Report ======================

Tracing not selected.

============== CGM Conformance Violation Report ==============

No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ============

No profile discrepancies detected.

================ Conformance Summary Report ================

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:44:56

Name of CGM under test: i:\9316-1\c205.cgm
Encoding              : Binary

Pictures Examined      : All
Elements Examined      : All
Bytes     Examined     : All

BEGIN METAFILE string : "AFCTN-01Rd"
METAFILE DESCRIPTION   : "AFCTN-01Rd, 91-10-03, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 162; string contains: "All Graphical
Primitive Elements"
```

Conformance Summary : This file conforms to the CGM specification.

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

```
      1 Pictures Tested
    213 Elements Tested
   3252 Octets Tested
```

```
===================================
|     No Errors Were Detected     |
===================================
```

```
================= End of Conformance Report ==================
```
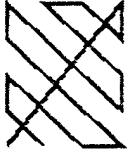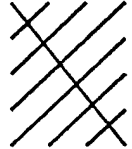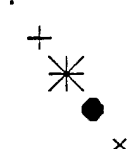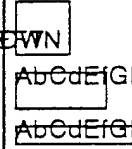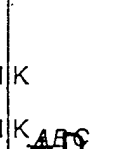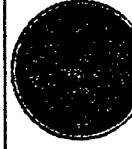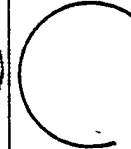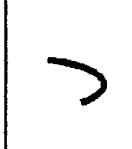
13.2.2 validcgm Log

```
Analysis for file c205.cgm using table table
MILSPEC 28003 error: illegal hatch index
(132, 1834)       (5, 24, 2)      Hatch Index 6
(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 3) occurred 1 time
(1, 5) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 11) occurred 1 time
(1, 13) occurred 1 time
(2, 2) occurred 1 time
(2, 3) occurred 1 time
(2, 4) occurred 1 time
(2, 5) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(4, 1) occurred 15 times
(4, 2) occurred 1 time
(4, 3) occurred 5 times
(4, 4) occurred 46 times
```
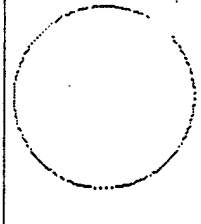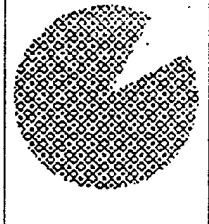
```
(4,  5) occurred 3 times
(4,  6) occurred 1 time
(4,  7) occurred 1 time
(4,  8) occurred 1 time
(4,  9) occurred 1 time
(4, 11) occurred 4 times
(4, 12) occurred 1 time
(4, 13) occurred 1 time
(4, 14) occurred 1 time
(4, 15) occurred 1 time
(4, 16) occurred 1 time
(4, 17) occurred 1 time
(4, 18) occurred 1 time
(4, 19) occurred 1 time
(5,  2) occurred 10 times
(5,  3) occurred 6 times
(5,  4) occurred 4 times
(5,  6) occurred 5 times
(5,  7) occurred 5 times
(5,  8) occurred 5 times
(5, 10) occurred 4 times
(5, 11) occurred 1 time
(5, 12) occurred 3 times
(5, 13) occurred 3 times
(5, 14) occurred 8 times
(5, 15) occurred 7 times
(5, 16) occurred 5 times
(5, 17) occurred 4 times
(5, 22) occurred 3 times
(5, 23) occurred 8 times
(5, 24) occurred 8 times
(5, 28) occurred 7 times
(5, 29) occurred 7 times
(5, 30) occurred 3 times
(5, 34) occurred 1 time
```

13.2.3 Output Harvard Graphics

(1) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
(7) POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 POINT
(14) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTICAL ARC CLOSE

LINE TYPE

CALS TEST NETWORK
MIL-D-28003
Computer Graphics Metafile
File: CTN-01Rd, 91-10-03

HG305 - C205 - 9316

13.2.4 Output IslandDraw
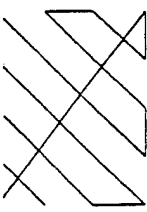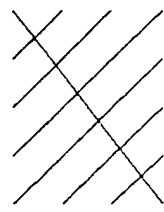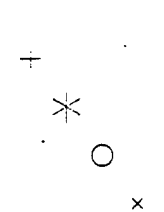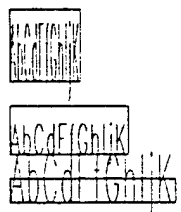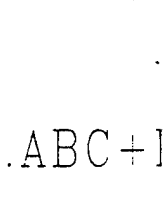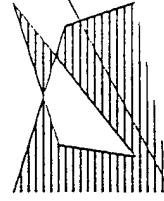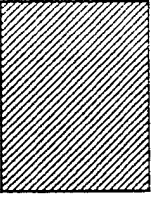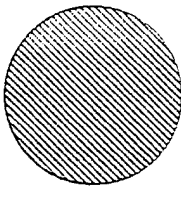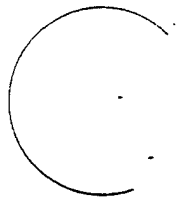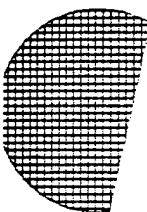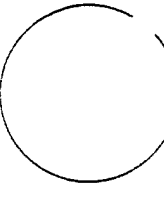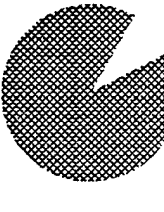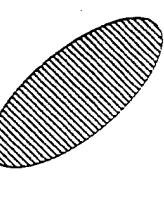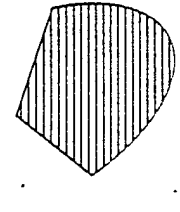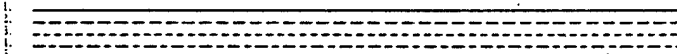
13.2.5 Output cgm2draw/IslandDraw

) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
) POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 PC
4) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTIC ARC CLOS

LINE TYPE

CALS TEST NETWORK
MIL-D-28003
Computer Graphics Metafile
File: CTN-01Rd, 91-10-03

13.3   File C206

13.3.1   Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:45:03


Metafile Examined     : i:\9316-1\c206.cgm


Pictures Examined     : All
Elements Examined     : All
Bytes    Examined     : All


======================= Trace Report =======================

Tracing not selected.

============= CGM Conformance Violation Report =============

No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ===========

No profile discrepancies detected.

================ Conformance Summary Report ================

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:45:05


Name of CGM under test: i:\9316-1\c206.cgm
Encoding              : Binary


Pictures Examined     : All
Elements Examined     : All
Bytes    Examined     : All


BEGIN METAFILE string : "arcs.cgm"
METAFILE DESCRIPTION  : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"


Picture 1 starts at octet offset 154; string contains: "Picture 1"


Conformance Summary   :  This file conforms to the CGM specification.
```

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

      1 Pictures Tested
    62 Elements Tested
  942 Octets Tested

```
====================================
|     No Errors Were Detected      |
====================================
```

`================= End of Conformance Report ==================`

13.3.2 validcgm Log

Analysis for file c206.cgm using table table
ERROR: illegal in this state (2), std B
ERROR: required precursor (0, 4) not yet seen
(14.1, 0)   (3, 6, 2)   Clip Indicator OFF
(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 3) occurred 1 time
(1, 4) occurred 1 time
(1, 5) occurred 1 time
(1, 6) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 10) occurred 1 time
(1, 11) occurred 1 time
(1, 12) occurred 1 time
(1, 13) occurred 1 time
(2, 2) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(3, 2) occurred 1 time
(3, 6) occurred 1 time

(3, 6) occurred illegally 1 time
(4, 1) occurred 2 times
(4, 3) occurred 3 times
(4, 12) occurred 5 times
(4, 15) occurred 4 times
(4, 17) occurred 4 times
(4, 18) occurred 2 times
(5, 2) occurred 5 times
(5, 3) occurred 5 times
(5, 4) occurred 4 times
(5, 6) occurred 2 times
(5, 7) occurred 1 time
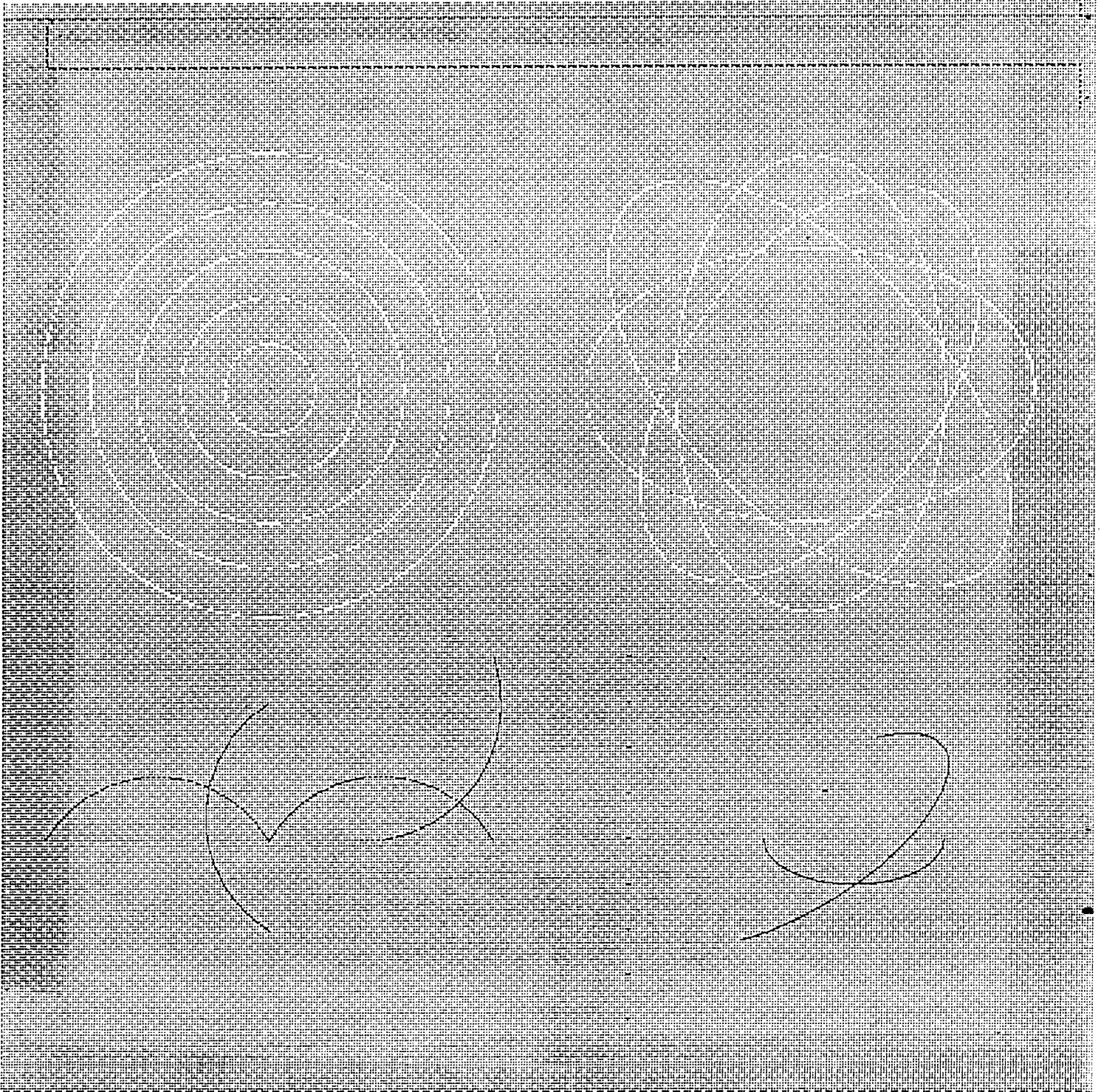(5, 8) occurred 1 time
(5, 22) occurred 1 time
(5, 23) occurred 1 time
(5, 34) occurred 1 time
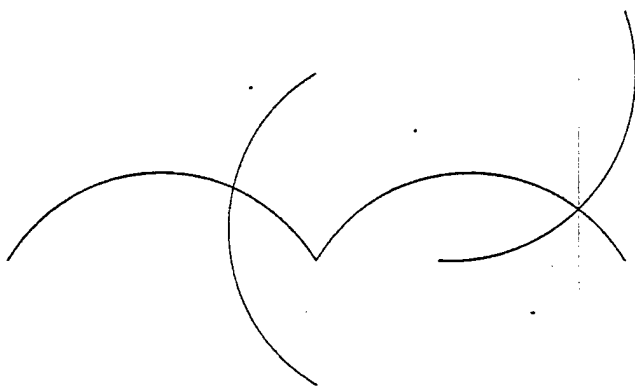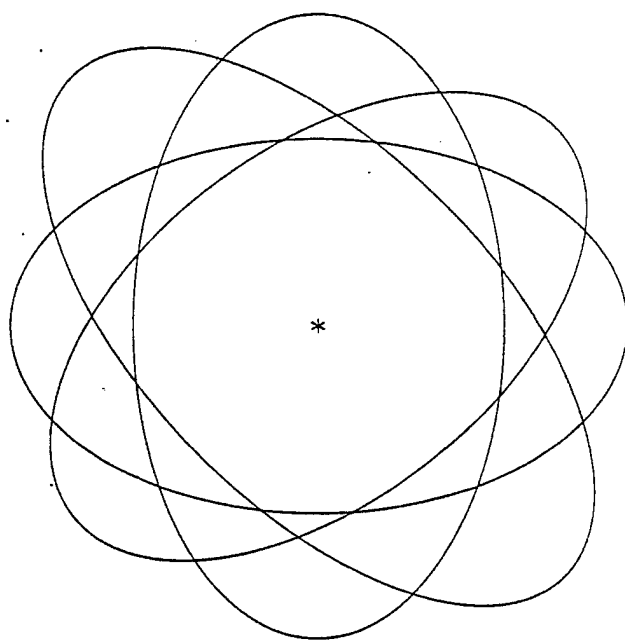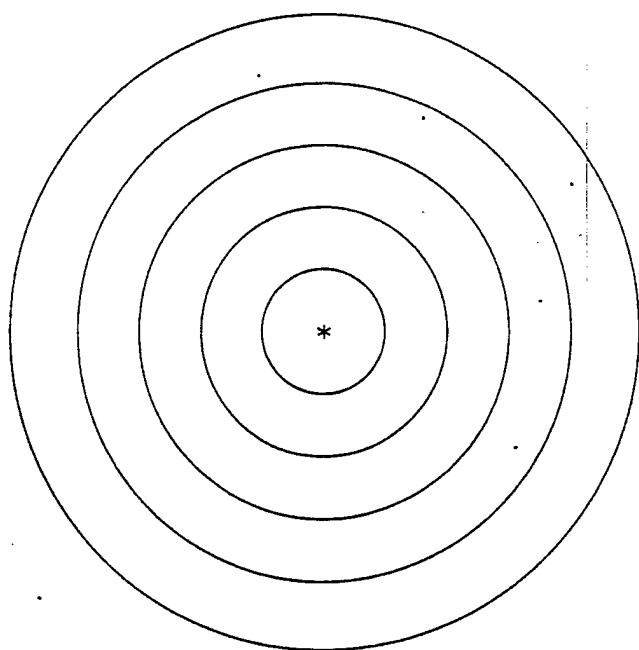
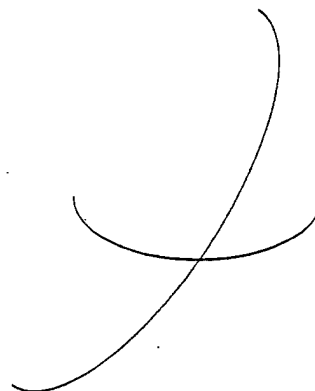### 13.3.3 Output Harvard Graphics
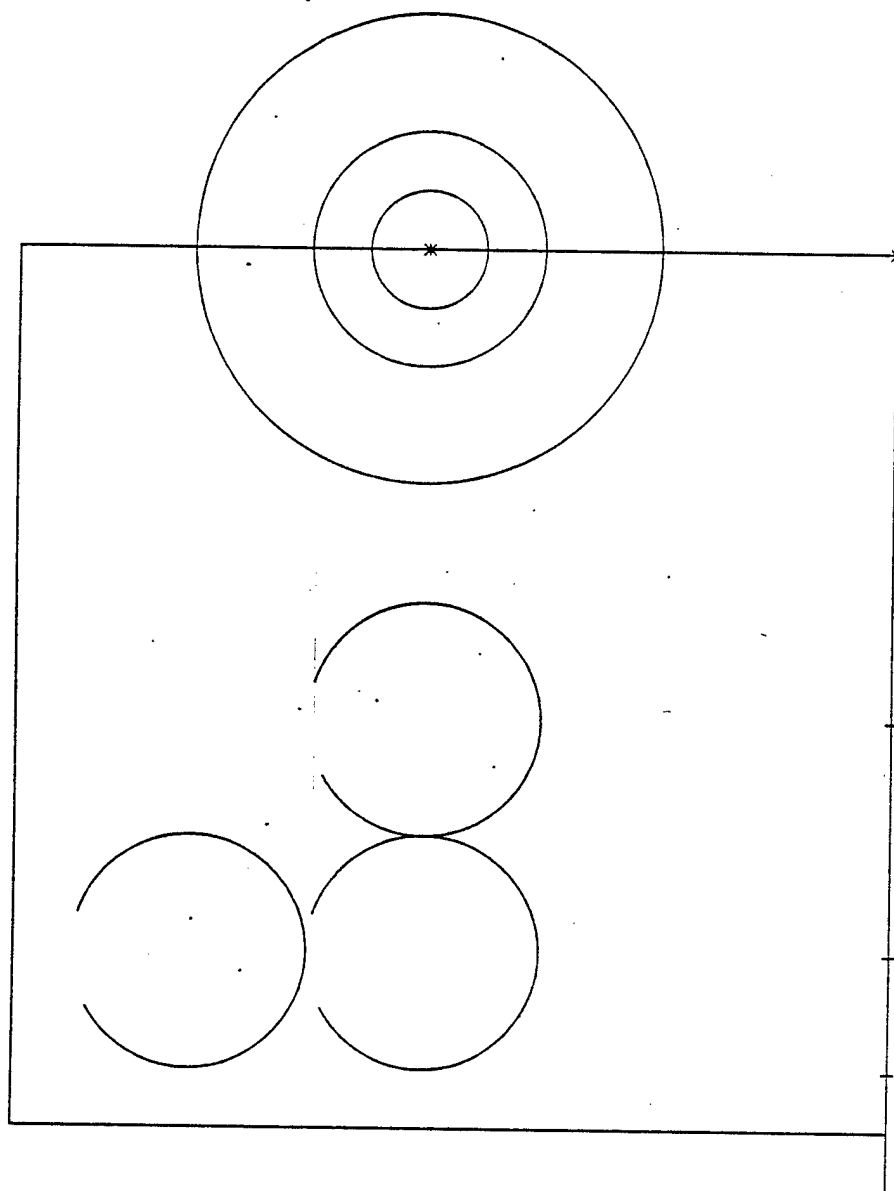
HG305 - C206 - 9316

13.3.4 Output IslandDraw

13.3.5 Output cgm2draw/IslandDraw

13.4 File C207

13.4.1 Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93     Time:  07:45:13


Metafile Examined     : i:\9316-1\c207.cgm


Pictures Examined     : All
Elements Examined     : All
Bytes     Examined     : All


======================= Trace Report =======================

Tracing not selected.

============= CGM Conformance Violation Report =============

No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ===========

No profile discrepancies detected.

================ Conformance Summary Report ================

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93     Time:  07:45:15

Name of CGM under test: i:\9316-1\c207.cgm
Encoding               : Binary

Pictures Examined     : All
Elements Examined     : All
Bytes     Examined     : All

BEGIN METAFILE string : "fills.cgm"
METAFILE DESCRIPTION  : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 154; string contains: "Picture 1"

Conformance Summary  :  This file conforms to the CGM specification.
```

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

        1 Pictures Tested
       56 Elements Tested
      856 Octets Tested

```
=====================================
|    No Errors Were Detected    |
=====================================
```

================ End of Conformance Report ==================

13.4.2   validcgm Log

Analysis for file c207.cgm using table table
ERROR: illegal in this state (2), std B
ERROR: required precursor (0, 4) not yet seen
(14.1, 0)   (3, 6, 2)   Clip Indicator OFF
(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 3) occurred 1 time
(1, 4) occurred 1 time
(1, 5) occurred 1 time
(1, 6) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 10) occurred 1 time
(1, 11) occurred 1 time
(1, 12) occurred 1 time
(1, 13) occurred 1 time
(2, 2) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(3, 2) occurred 1 time
(3, 6) occurred 1 time
(3, 6) occurred illegally 1 time

(4, 1) occurred 1 time
(4, 7) occurred 2 times
(4, 12) occurred 2 times
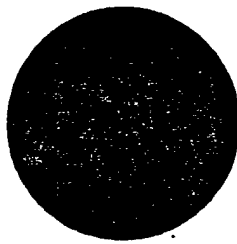(4, 16) occurred 2 times
(4, 17) occurred 2 times
(4, 19) occurred 2 times
(5, 2) occurred 1 time
(5, 3) occurred 1 time
(5, 4) occurred 1 time
(5, 22) occurred 6 times
(5, 23) occurred 6 times
(5, 24) occurred 1 time
(5, 30) occurred 6 times
(5, 31) occurred 1 time
(5, 34) occurred 1 time

13.4.3 Output Harvard Graphics
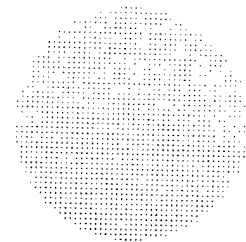
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13.4.4 Output IslandDraw
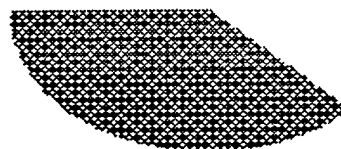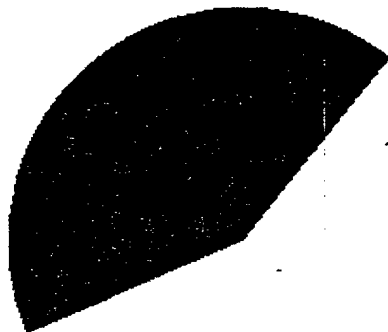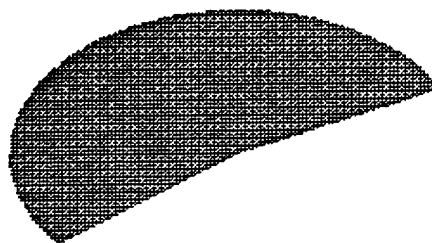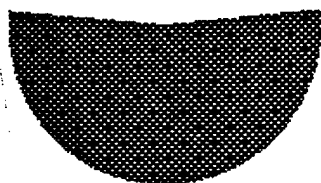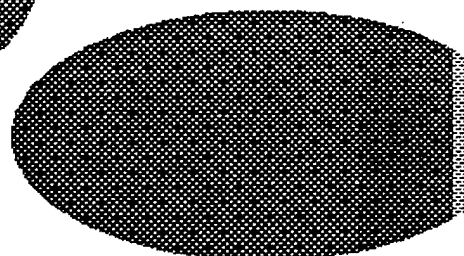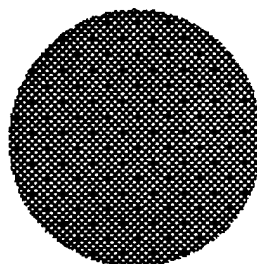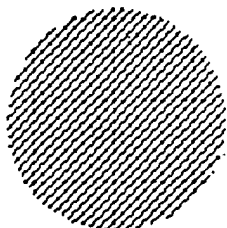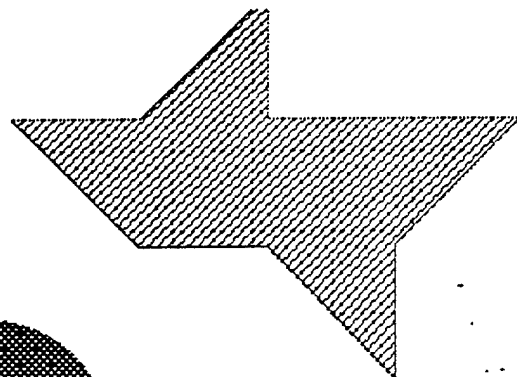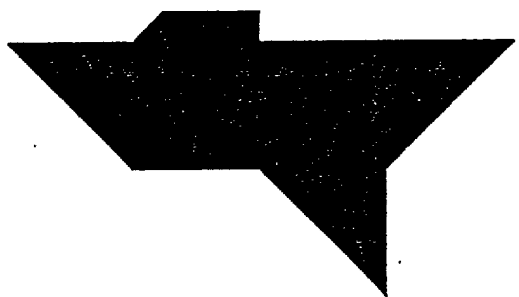
13.4.5   Output cgm2draw/IslandDraw
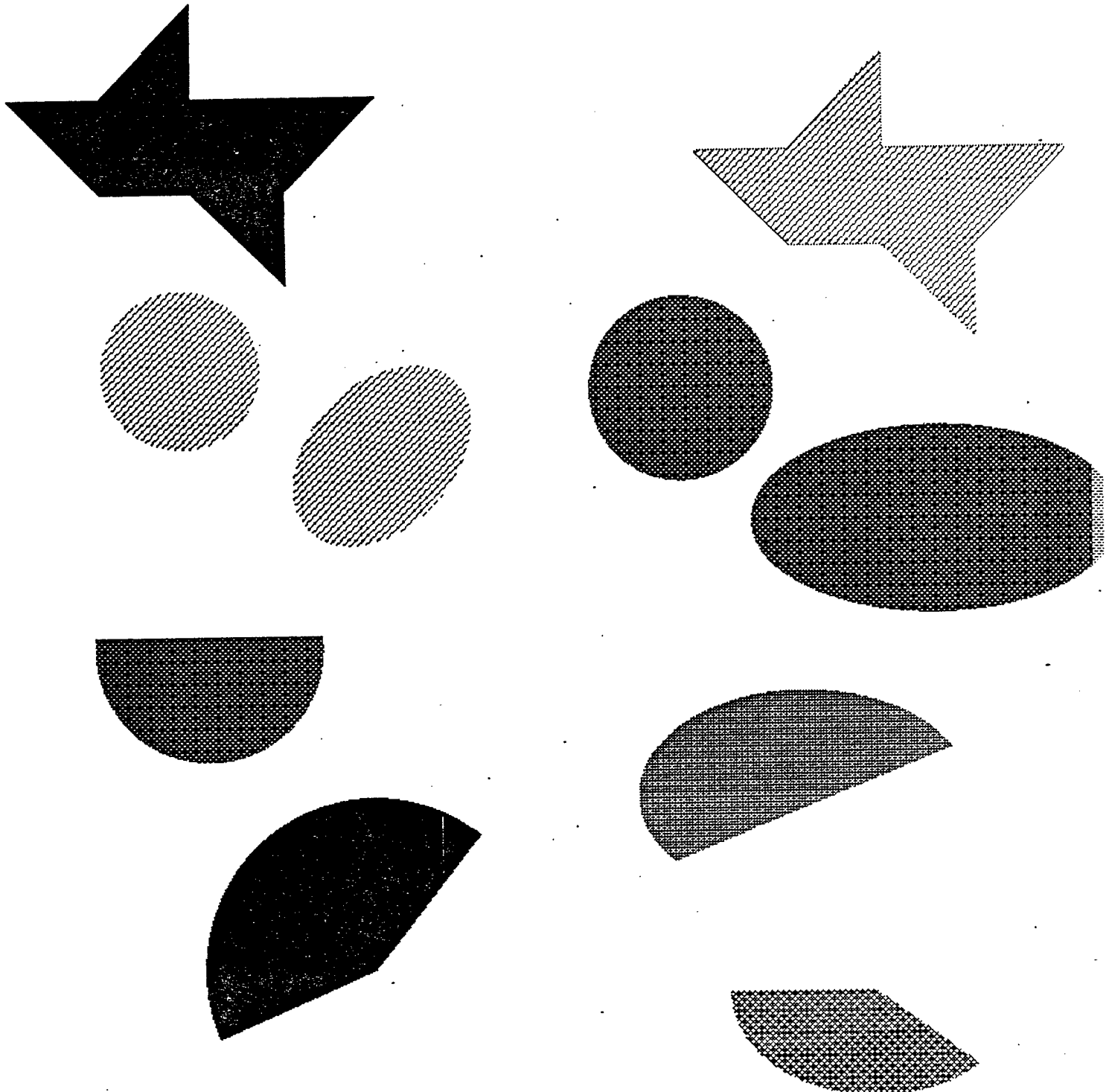
13.5 File C208

13.5.1 Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:45:22

Metafile Examined    : i:\9316-1\c208.cgm

Pictures Examined    : All
Elements Examined    : All
Bytes    Examined    : All

======================= Trace Report ========================

Tracing not selected.

============= CGM Conformance Violation Report ==============

No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ============

No profile discrepancies detected.

================ Conformance Summary Report =================

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:45:24

Name of CGM under test: i:\9316-1\c208.cgm
Encoding              : Binary

Pictures Examined    : All
Elements Examined    : All
Bytes    Examined    : All

BEGIN METAFILE string : "lines.cgm"
METAFILE DESCRIPTION  : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 130; string contains: "Picture 1"

Private values encountered in CGM
```

Conformance Summary : This file conforms to the CGM specification.

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

```
    1 Pictures Tested
   71 Elements Tested
  664 Octets Tested
```

```
===================================
|    No Errors Were Detected    |
===================================
```

```
================ End of Conformance Report ==================
```

13.5.2 validcgm Log

```
Analysis for file c208.cgm using table table
ERROR: illegal in this state (2), std B
ERROR: required precursor (0, 4) not yet seen
(13.1, 0)        (3, 6, 2)      Clip Indicator OFF
(0, 1)  occurred 1 time
(0, 2)  occurred 1 time
(0, 3)  occurred 1 time
(0, 4)  occurred 1 time
(0, 5)  occurred 1 time
(1, 1)  occurred 1 time
(1, 2)  occurred 1 time
(1, 3)  occurred 1 time
(1, 4)  occurred 1 time
(1, 5)  occurred 1 time
(1, 6)  occurred 1 time
(1, 7)  occurred 1 time
(1, 8)  occurred 1 time
(1, 9)  occurred 1 time
(1, 10) occurred 1 time
(1, 11) occurred 1 time
(1, 12) occurred 1 time
(2, 2)  occurred 1 time
(2, 6)  occurred 1 time
(2, 7)  occurred 1 time
(3, 2)  occurred 1 time
(3, 6)  occurred 1 time
```

(3, 6) occurred illegally 1 time
(4, 1) occurred 14 times
(5, 2) occurred 12 times
(5, 3) occurred 12 times
(5, 4) occurred 12 times
(5, 34) occurred 1 time

13.5.3 Output Harvard Graphics

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13.5.4 Output IslandDraw

13.5.5 Output cgm2draw/IslandDraw

13.6   File C209

13.6.1   Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:45:32


Metafile Examined     : i:\9316-1\c209.cgm


Pictures Examined     : All
Elements Examined     : All
Bytes     Examined    : All


======================= Trace Report =======================


Tracing not selected.


============== CGM Conformance Violation Report ==============


No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ============


No profile discrepancies detected.


================= Conformance Summary Report ================


MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/04/93      Time:  07:45:33


Name of CGM under test: i:\9316-1\c209.cgm
Encoding              : Binary


Pictures Examined     : All
Elements Examined     : All
Bytes     Examined    : All


BEGIN METAFILE string : "text.cgm"
METAFILE DESCRIPTION   : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"


Picture 1 starts at octet offset 178; string contains: "Picture 1"


Conformance Summary  :  This file conforms to the CGM specification.
```

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

```
    1 Pictures Tested
   67 Elements Tested
  896 Octets Tested
```

```
=====================================
|    No Errors Were Detected    |
=====================================
```

```
================= End of Conformance Report ===================
```

13.6.2   validcgm Log

```
Analysis for file c209.cgm using table table
ERROR: illegal in this state (2), std B
ERROR: required precursor (0, 4) not yet seen
(14.1, 0)          (3, 6, 2)       Clip Indicator OFF
(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 3) occurred 1 time
(1, 4) occurred 1 time
(1, 5) occurred 1 time
(1, 6) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 10) occurred 1 time
(1, 11) occurred 1 time
(1, 12) occurred 1 time
(1, 13) occurred 1 time
(2, 2) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(3, 2) occurred 1 time
(3, 6) occurred 1 time
(3, 6) occurred illegally 1 time
```

```
(4,  4) occurred 17 times
(5, 10) occurred 3 times
(5, 12) occurred 3 times
(5, 13) occurred 3 times
(5, 14) occurred 2 times
(5, 15) occurred 4 times
(5, 16) occurred 5 times
(5, 17) occurred 4 times
(5, 18) occurred 4 times
(5, 34) occurred 1 time
```

13.6.3 Output Harvard Graphics

BOLD 45

RIGHCENTEXTU PLEATEXT

TEXT 12

BOLD .15

SPACING 2

EXPANSION FACTOR 1.5

TEXT COLOR RED

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13.6.4   Output IslandDraw

RIGHT TEXT

ABCD
EFG
HIJK
LMOP
QRST
UVW
XYZ

DOWN TEXTTEXT

BOLD 45

TEXT .12

BOLD .15

SPACING 2

EXPANSION FACTOR 1.5

TEXT COLOR RED

13.6.5 Output cgm2draw/IslandDraw

CENTER TEXT

RIGHT TEXT

ABCD
EFG
HIJK
LMOP
QRST
UVW
XYZ

BOLD 45

D
O
W
N

T
E
X
T

T
X
E
T

P
U

TEXT .12

BOLD .15

S P A C I N G   2

EXPANSION FACTOR 1.5

TEXT COLOR RED